

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the year ended December 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 333-249833

Crown Electrokinetics Corp.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

47-5423944

(I.R.S. Employer
Identification No.)

1110 NE Circle Blvd Corvallis, OR
(Address of principal executive offices)

97330
(Zip Code)

(800) 674-3612

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, Par Value \$0.0001 Per Share	The Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input checked="" type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately \$11.3 million based upon a closing price of \$0.91.

As of March 31, 2023, there were 43,686,623 shares of the registrant's common stock outstanding.

CROWN ELECTROKINETICS CORP.
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2022

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PART I

In this Annual Report on Form 10-K, “we,” “our,” “us,” “Crown Electrokinetics,” “Crown” and “the Company” refer to Crown Electrokinetics Corporation, unless the context requires otherwise.

Forward-Looking and Cautionary Statements

This Annual Report on Form 10-K, as well as information included in oral statements or other written statements made or to be made by us, contain statements that constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, and other future conditions. Forward-looking statements can be identified by words such as “anticipate,” “believe,” “envision,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “target,” “potential,” “will,” “would,” “could,” “should,” “continue,” “ongoing,” “contemplate” and other similar expressions, although not all forward-looking statements contain these identifying words. Examples of forward-looking statements include, among others, statements we make regarding:

- future financial position;
- business strategy;
- budgets, projected costs and plans;
- future industry growth;
- financing sources;
- the impact of litigation, government inquiries and investigations; and
- all other statements regarding our intent, plans, beliefs or expectations or those of our directors or officers.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

The forward-looking statements in this Annual Report on Form 10-K represent our views as of the date of this Report. We undertake no obligation to publicly update any forward-looking statements whether as a result of new information, future developments or otherwise.

Market and Industry Data

Some of the market and industry data contained in this Annual Report on Form 10-K are based on independent industry publications or other publicly available information. Although we believe that these independent sources are reliable, we have not independently verified and cannot assure you as to the accuracy or completeness of this information. As a result, you should be aware that the market and industry data contained herein, and our beliefs and estimates based on such data, may not be reliable.

ITEM 1. BUSINESS.

Overview

Crown Electrokinetics Corp. (“Crown” or the “Company”) develops and sells optical switching film that can be embedded between sheets of glass or applied to the surface of glass, or other rigid substrates such as acrylic, to electronically control opacity (“DynamicTint™”). Originally developed by Hewlett-Packard (“HP”), our technology allows a transition between clear and dark in seconds and can be applied to a wide array of windows, including commercial buildings, automotive sunroofs, and residential skylights and windows. At the core of Crown’s proprietary and patent-protected technology is a thin film that is powered by electrically charged pigment which not only replaces common window tints but is also a more sustainable alternative to traditional window treatments. Crown partners with leading glass and film manufacturers for mass production and distribution of DynamicTint.

Electrokinetic Film Technology

Crown’s electrokinetic (EK) technology was derived from proprietary ink and microfluidic technology developed at HP. Electrokinetic refers to the movement of particles within a fluid under the influence of an electric field. Our EK film technology utilizes nanometer-sized pigment particles that are electrically charged and suspended in a liquid that is sandwiched between two clear substrates that are coated with a transparent conductor oxide (TCO) film. *Figure 1.* In a non-energized state, the suspended pigment particles are distributed uniformly between the plastic films, and will absorb, transmit, or reflect light depending on the properties of the suspended pigment (dark state). When the proper electrical signal is applied to the conductive TCO layers, an electrical field is created and the charged pigment particles collect in micro-embossed holes in a layer of polymer resin covering the transparent conductor surface. As the charged pigment particles are collected, the fluid becomes highly transparent (clear state). By applying a different electrical signal, the pigment can be dispersed back into the fluid to achieve the desired color density or opaqueness.

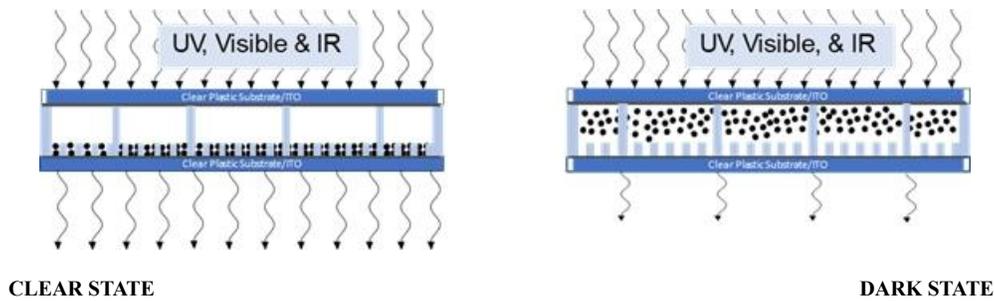


Figure 1. Schematic cross-section of electrokinetic film in clear and dark states.

Highlights

- **Clear Polyethylene Terephthalate (PET) Substrates** - Same material as window tinting films.
- **Transparent Conductor on PET** - Indium Tin Oxide (ITO) - same as most touch screens.
- **Electronic Ink** - Nanoparticles suspended in a fluid which absorb light.
- **Energy Source** - Nanoparticles are controlled through DC low voltage applied to the ITO conductor material which is powered by a lithium ion battery that is charged with a solar cell strip, no hard-wiring necessary.

Our plastic films are manufactured using industry standard roll-to-roll (R2R) processing equipment. The Company believes its R2R processing will have an inherently lower manufacturing cost compared to sheet-based processing methods used for other smart window technologies like electrochromic glass. There are three basic steps to making our film using R2R equipment.

- 1) **Deposition:** R2R TCO deposition on clear polyethylene terephthalate (PET) plastic film using vacuum sputtering of indium-tin oxide (ITO). The ITO on PET film can be provided by a number of suppliers. Millions of square feet of ITO on PET are currently provided for nearly all capacitance-based display touch screens.

- 2) **Embossing:** R2R embossing of UV-curable resin in a proprietary and patent protected 3-D pattern for ink pigment control and containment on one of the two plastic films. An example of the embossed pattern is shown in *Figure 2*. The R2R embossing process can be completed by various plastic film companies. Crown has the capability to accomplish the coating and embossing steps within its current facility in addition to working with manufacturing partners.

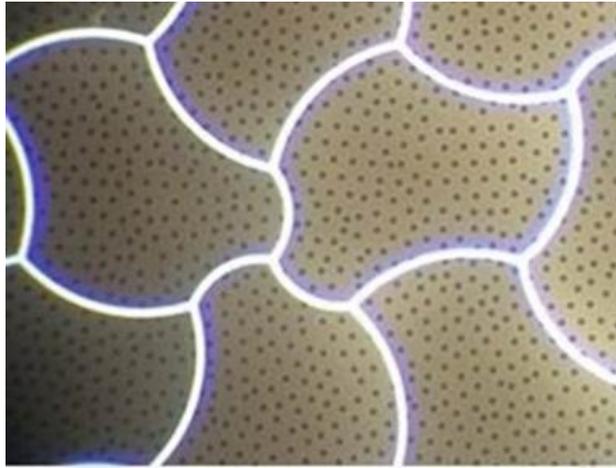


Figure 2. Microscopic Optical Image of Embossed Film

- 3) **Lamination:** The final R2R process laminates the two layers of PET together with the proprietary and patent protected pigment-containing fluid contained by the wall structure shown by the white areas in *Figure 2*. The wall area has adhesion to the upper layer of PET with ITO film thereby sealing the fluid between the two plastic layers. The fluid contains nanometer-sized pigment particles that are charged electrically and suspended in the fluid.

We believe that DynamicTint™ has the following distinct advantages over existing optical electronic film technologies:

- **Neutral Color** - Pigment is designed to be color neutral and will not affect the hue of what is viewed through the window in any clear, dark or tinted state.
- **Speed** - Transition time is typically a few seconds.
- **Affordability** - Roll-to-Roll film manufacturing using relatively inexpensive materials.
- **Low Energy Requirements** - Film is low voltage and can be powered with a small battery charged by a solar cell strip or wired to an existing electrical infrastructure including a LAN line.
- **Retro-Fit** - Film can be applied to a sheet of acrylic or thin glass, called a Smart Window Insert (“Inserts”), and placed within an existing window frame, eliminating the need to replace single pane windows with dual pane windows.
- **Sustainable** - Reduces energy used to heat or cool a room via HVAC systems and can use renewable energy to transition the film.

Smart Window Insert

Crown's first product will be the Smart Window Insert powered by DynamicTint™ which is specifically designed for retrofitting in the domestic and international commercial real estate install base. Our DynamicTint™ can be laminated to other surfaces like heat-treated glass or acrylic and the laminated sheet can be assembled in Smart Window Inserts that can be placed into the interior side of the window frame providing the dynamic tinting capability as well as additional insulation and sound proofing to the existing windows (*Figure 3*).

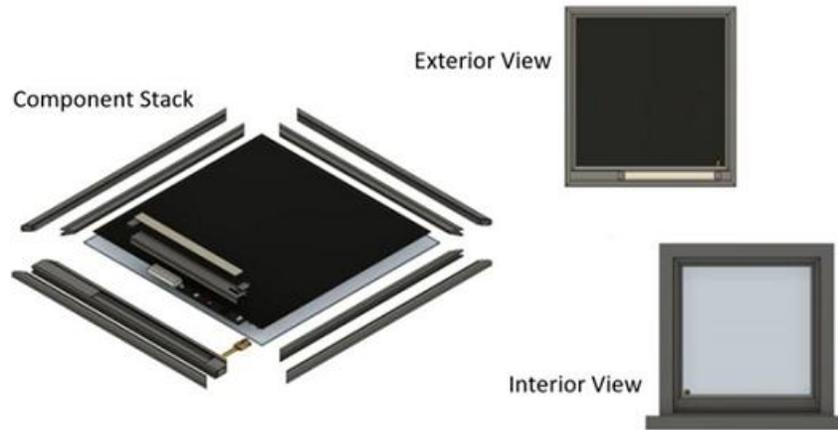


Figure 3. Window Insert with EK Film

The Insert is a custom-sized panel comprised of a rigid substrate (acrylic or thin glass) with a silicon compliant edge seal that allows for the insert to securely fit into the interior side of the window frame.

Some of the Insert's features include:

- **Solar-powered** - eliminating the need to hardwire it into the building's electrical system
- **Wirelessly enabled** - facilitating communication with all the other installed inserts and integration with the building's management software system
- **Sensor equipped** - enabling the Insert to auto-sense the intensity of exterior light and interior ambient light
- **Software enabled** - can be managed via programmed macros, dynamically managed by the building, or user-controlled within an office
- **Data collection** - allowing optimization of the Inserts/curtain wall energy performance
- **Lease vs Purchase** - Creative and flexible financing allows for customers to lease Inserts on a long-term basis and avoid large capital expenditures

We believe Crown's Smart Window Inserts can be easily installed into commercial buildings, skylights, residential windows, and windows within garage doors. In commercial buildings, our Smart Window Inserts can be used to convert existing single pane windows into dual pane windows. Crown believes that there is a significant opportunity to provide Smart Window Inserts to commercial building owners who are looking to eliminate window blinds, gain energy efficiency, and reduce carbon emissions.

Sustainability

Crown is aware that working towards building a sustainable future is a common goal shared by many. Companies such as Walmart, Amazon and Apple are now publishing their sustainability pledges, and we are seeing a trend of pledging to make their workplaces more environmentally friendly.

Crown's patented technology provides a solution that helps address many sustainability issues such as:

- **Reducing waste** - as opposed to replacing single pane window units with newly manufactured dual pane windows, Crown allows building owners to install our retrofit DynamicTint Insert into existing single pane window frames thereby creating a dual pane window;
- **Reducing energy** - Crown's Insert reduces HVAC energy consumption by reducing the need for constantly cooling and heating a room, reducing the customers carbon emissions. Initial field testing suggests HVAC energy savings of up to 26% could potentially result from the installation of Smart Window Inserts. According to FacilitiesNet (<https://www.facilitiesnet.com/windowsexteriorwalls/article/Smart-Window-Benefit-Energy-Savings-Reduced-Glare--17280>), the ability to control the amount of heat entering a building reduces the heat load of the building which in turn reduces your HVAC usage.;
- **Using renewable energy** - Crown's DynamicTint Insert is low voltage and low wattage and can be powered by a solar strip that captures the sun's energy and is integrated into the Insert itself thereby eliminating the need to hardwire the Insert to the home or building's electrical system.

Another benefit of DynamicTint is being able to optimize daylight usage, thereby reducing the usage of lights. A study done by Project Drawdown (<https://www.drawdown.org/solutions/dynamic-glass>) projected that if 30-50% of commercial building spaces install dynamic glass, the potential climate-weighted energy efficiency from cooling is estimated at 9% and lighting at 9%-depending on local climate, building location and window orientation. This can result in 0.3-0.5 gigatons of emissions reductions from decreased energy use.

At Crown, we are committed to building a product that can be self-sufficient and does not require an additional power source or hard wiring into the electrical system of a residential home or commercial building. This ensures that as we reduce a building's energy consumption, we are not adding to it and are working towards being carbon neutral.

Intellectual Property

On January 31, 2016, we entered into an IP agreement with HP to acquire a research license to determine the feasibility of incorporating HP's electrokinetic display technology in our products. On February 4, 2021, Crown and HP entered into a fourth amendment to the agreement. Pursuant to such amendment, among other items, the parties agreed to amend the list of patent and patent applications, which includes two additional patents (the "HP Patents") that are assignable to the Company by HP upon the exercise of the Company's option to acquire the HP Patents (the "Option"). In connection with the Company's exercise of the Option, the Company paid HP an aggregate amount equal to One Million Five Hundred Fifty Thousand Dollars (\$1,550,000) on February 9, 2021. From the date of the exercise of the Option until January 1, 2030, the Company agreed to pay to HP a royalty fee based on the cumulative gross revenue received by the Company from the HP Patents as follows:

<u>Time Window</u>	<u>Lifetime Cumulative Gross Revenue</u>	<u>Royalty Rate</u>
Prior to December 31, 2029	Less than \$70,000,000	0.00%
	\$ 70,000,000 - \$500,000,000	1.25%
	\$ 500,000,000 and beyond	1.00%

January 1, 2030 onward 0.00%

The Company entered into a Patent Assignment Agreement with International Business Machines Corporation ("IBM") to acquire an ownership interest in assigned patents. As consideration for the patents, the Company paid \$264,000 (including legal fees of approximately \$38,000) during the nine months ended December 31, 2021.

In addition, the Company has current patent applications in the United States and other countries that if granted, would add three additional patents to its portfolio. The Company's United States patents expire at various dates from March 26, 2028 through March 10, 2036

A 2022 appraisal of Crown's intellectual property by one of the preeminent third-party IP-valuation firms indicated a total valuation of approximately \$94 mm, consisting of \$35 mm relating to patents (limited to the US office building market, supplying its Smart Window Insert) and \$59 mm for trade secrets.

The Company believes that its EK technology is adequately protected by its patent position and by its proprietary technological know-how. However, the validity of the Company's patents has never been contested in any litigation. The Company also possesses know-how and relies on trade secrets and nondisclosure agreements to protect its technology. The Company requires any employee, consultant, or licensee having access to its confidential information to execute an agreement whereby such person agrees to keep such information confidential.

Crown-Owned Patents

Country	Filing Date	Publication No.	Title
USA	28-Jan-19	11174328	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
China	28-Jan-19	CN111918894A	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
Europe	28-Jan-19	3752867	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
Japan	28-Jan-19	JP 2021514422A	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
Korea	28-Jan-19	KR 20200122333A	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
WO	28-Jan-19	WO 2019/160675	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
USA	16-Feb-18		REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
USA	13-Jan-20	2020-0225552	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
WO	13-Jan-20	WO2020/150166	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
USA	16-Jan-19		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
EPO	23-Jun-21		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
CN	8-Jul-21		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
Korea	5-Jul-21		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
JP	15-Jul-21		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
USA	7-Jul-16	10377909	INKS INCLUDING SEGMENT COPOLYMER GRAFTED PIGMENTS VIA AZIDE CHEMISTRY
USA	22-Nov-10	8179590	ELECTRO-OPTICAL DISPLAY
USA	29-Jul-10	8054535	ELECTROPHORETIC DISPLAY DEVICE

USA	23-Aug-17	10852615 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
EPO	2-Dec-15	3256903 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS
EPO	2-Dec-15	3250962 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
USA	23-Aug-17	10656493 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS
USA	30-Nov-20	2021-0108463 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
WO	2-Dec-15	WO2016/089957 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS
WO	2-Dec-15	WO2016/089974 *	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
USA	18-Dec-14	9567995	WINDOW OPACITY ATTENUATION USING MICROFLUIDIC CHANNELS
USA	18-Aug-15	9816501	WINDOW OPACITY ATTENUATION USING MICROFLUIDIC CHANNELS
USA	9-Mar-18	10926859	SMART WINDOW ACTIVATION TO PREVENT LASER DISTURBANCE
USA	10-May-18	10935818	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
USA	26-Oct-16	10106018	AUTOMATED WINDSHIELD GLARE ELIMINATION ASSISTANT
USA	2-Sep-16	10144275	ENVIRONMENTAL CONTROL IN VEHICLES
GB	2-May-19	2586760	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
CN	2-May-19	CN111936331A	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
DE	2-May-19	112019000749	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
JP	2-May-19		EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
PCT	2-May-19	WO2019/215544 **	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
USA	11-Oct-21	11578150	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
USA	24-Feb-22		WINDOW SYSTEM AND METHOD UTILIZING A WINDOW PANE ASSEMBLY AND LOCKING SYSTEM FOR EASY INSERTION OF A WINDOW PANE ASSEMBLY WITH ELECTRONICALLY CONTROLLABLE SCALABLE APERTURES FOR ATTENUATING OR OTHERWISE MODULATING LIGHT TRANSMISSION THROUGH SAID ASSEMBLY
USA	24-Feb-22		WINDOW SYSTEM AND METHOD UTILIZING A WINDOW PANE ASSEMBLY AND LOCKING SYSTEM FOR EASY INSERTION OF A WINDOW PANE ASSEMBLY WITH ELECTRONICALLY CONTROLLABLE SCALABLE APERTURES FOR ATTENUATING OR OTHERWISE MODULATING LIGHT TRANSMISSION THROUGH SAID ASSEMBLY
USA	29-Mar-22		SELF-ALIGNING MASTER AREA MULTIPLICATION FOR CONTINUOUS EMBOSSING
USA	11-Sep-22		APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
USA	22-Jul-14		INKS INCLUDING SEGMENT COPOLYMER GRAFTED PIGMENTS VIA AZIDE CHEMISTRY (recently assigned to Crown)
USA	10-Feb-23		REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
PCT	23-Feb-23		WINDOW SYSTEM AND METHOD UTILIZING A WINDOW PANE ASSEMBLY AND LOCKING SYSTEM FOR EASY INSERTION OF A WINDOW PANE ASSEMBLY WITH ELECTRONICALLY CONTROLLABLE SCALABLE APERTURES FOR ATTENUATING OR OTHERWISE MODULATING LIGHT TRANSMISSION THROUGH SAID ASSEMBLY

* Co-owned with University of Cincinnati

** Inactive

In-Licensed Patents

Patent No.	Country	Patent Date	Status	Title
8,183,757	USA	May 22, 2012	Issued	DISPLAY ELEMENT
8,184,357	USA	May 22, 2012	Issued	DISPLAY ELEMENT
8,331,014	USA	December 11, 2012	Issued	PIGMENT-BASED INKS
8,384,659	USA	February 26, 2013	Issued	DISPLAY ELEMENT INCLUDING ELECTRODES AND A FLUID WITH COLORANT PARTICLES
8,432,598	USA	April 30, 2013	Issued	TRANSPARENT CONDUCTOR STRUCTURE
8,896,906	USA	November 25, 2014	Issued	INKS INCLUDING BLOCK COPOLYMER GRAFTED PIGMENTS VIA AZIDE CHEMISTRY
8,018,642	USA	September 13, 2011	Issued	ELECTRO-OPTICAL DISPLAY

Business Model

We intend to manufacture our patented EK Technology under the name DynamicTint™. We intend to generate revenue by selling our Smart Window Inserts powered by DynamicTint™ to our customers.

Crown's first product will be the Smart Window Insert powered by DynamicTint™ for retrofitting in commercial buildings. Crown's Smart Window Inserts will allow the building owner to quickly convert a single pane window unit to a dual pane window unit. Crown's inserts will act as the "second pane" and will allow the building owner to enjoy all the benefits of a dual pane window without having to replace their existing single pane windows.

Crown's customers will be able to buy and own their Smart Window Inserts but also, at some stage, have the option to enter long-term leases of the Inserts with Crown.

Additional applications we are exploring with potential customers of Crown's DynamicTint include:

- Smart Window Inserts for retrofitting of commercial buildings in markets outside the United States.
- Smart window Inserts for retrofitting of multi-family buildings.
- Residential homes: residential windows, garage door windows, windows contained in and surrounding residential front doors as well as residential skylights.
- Automotive: sunroofs.

As Crown's DynamicTint technology requires very little energy to effect that transition from clear to dark state, a rechargeable battery coupled with a built-in solar cell eliminates the need to hardwire the inserts to the building electrical system. Crown believes that the potential retrofit market for its DynamicTint Building Inserts is significantly large. Each unit will have wireless communication capability for control of the film and communication with the building HVAC system.

Crown has also developed a working prototype of an insert for the residential skylight, which allows a homeowner to control the amount of light entering the room. Crown's DynamicTint Insert does not require the homeowner to replace their skylight as it conveniently fits into the existing frame. Crown's skylight insert will allow a homeowner (through a Bluetooth connection or RF controller) to adjust the level of desired tint easily and quickly, thereby controlling the amount of light and heat entering the room. The DynamicTint Skylight Insert will be powered by a rechargeable lithium battery and built-in solar cell thereby eliminating the need to wire the insert to the home's electrical system.

Partners and Customers

On March 25, 2022, Crown executed a Master Supply Agreement (the “BDN MSA”) with Brandywine Operating Partnerships L.P. to install its Smart Window Inserts powered by DynamicTint™ in Brandywine office buildings. The BDN MSA provides the master terms and conditions under which purchase orders will be executed for Crown to supply units to retrofit windows at certain locations.

On December 27, 2021, Crown executed a Master Supply Agreement (the “HPP MSA”) with Hudson Pacific Properties L.P. for the installation of Crown’s energy saving Smart Window Inserts in several office properties across its West Coast portfolio. The HPP MSA provides the master terms and conditions under which purchase orders will be executed for Crown to supply units to retrofit windows at certain locations.

Prior to this, on September 27, 2021, Crown had entered into a Master Supply Agreement with MetroSpaces Inc., Crown’s first commercial customer, install its Smart Window Inserts in MetroSpaces’ 70,000 square-foot Houston, Texas office building.

In the future, Crown and its customers may enter into multiple specific transactions by executing purchase orders for additional buildings.

Additionally, discussions with multiple other building owners to buy Crown Smart Window Inserts are progressing as the regulatory and consumer pressure to reduce the level of energy consumption and carbon emissions continues to build.

Purchase Orders

On August 12, 2022, the Company entered into two Purchase Orders (PO’s) with Hudson Pacific Properties, L.P. (“Hudson”) for the purchase of the Company’s Smart Window Inserts™ (“Inserts”). Hudson is a unique provider of end-to-end real estate solutions for tech and media tenants. The PO’s have a value of \$85,450 and represent the first orders the Company has received prior to the launch of its Inserts. Delivery and installation are expected to begin in Q2 2023.

On August 12, 2022, as additional consideration for the PO’s, the Company issued a warrant to Hudson to purchase 300,000 shares of the Company’s common stock at \$0.75 per share. The warrant has a five year life and expires on August 12, 2027.

Manufacturing

Crown is developing its manufacturing capabilities to meet anticipated demand for the Smart Window Insert at both its Oregon facilities located in Corvallis for film production, and Salem for Smart Window Insert manufacturing.

Crown plans to produce its EK film at its facilities in Corvallis using its existing roll to roll (the “R2R”) embossing equipment. The Company intends to perform all other film manufacturing processes at its Corvallis facility upon receipt of additional manufacturing equipment currently ordered and awaiting delivery.

Crown’s Smart Window Inserts will be produced at the Company’s Salem facility, where EK film will be laminated to glass, and then assembled into a frame. The inserts electronic components will also be integrated into the insert and the final assembled inserts will be packaged for shipment from Salem to our customers’ buildings.

The completion of Crown’s facilities in Corvallis and Salem marks the company’s transition to being completely self-sufficient in manufacturing its products, eliminating any dependency on contract manufacturers or partners.

Commercial Office Building Market

Commercial buildings have gotten larger in the United States as their floorspace continues to grow faster than the number of commercial buildings, according to preliminary results from the U.S. Energy Information Administration’s (EIA) 2018 *Commercial Buildings Energy Consumption Survey* (CBECS). CBECS estimates that 5.9 million U.S. commercial buildings contained a total of 97 billion square feet as of 2018. The number of commercial buildings increased by 6%, and commercial square footage increased by 11% since the CBECS was last conducted in 2012.

Smart Glass Industry Trends

We believe there are favorable converging global trends in the major near-term markets for “smart glass” products. Key factors driving the growth of the smart glass market are the growing demand for smart glass for energy savings for existing commercial and residential buildings. Added to this trend are government mandates and legislation for energy-efficient construction of both commercial and residential buildings. There is a growing opportunity for smart windows in the transportation industry including automobiles, commercial trucks, buses, and passenger rail cars.

In both public and private sectors across the world, there are substantial efforts targeted toward the promotion and use of energy efficient smart glass materials, including those used in automobiles, windows and other architectural glazings.

In September 2020, Markets and Markets issued *Smart Glass Market with COVID-19 Impact by Technology (Suspended Particle Display, Electrochromic, Liquid Crystal), Application (Architecture, Transportation, Consumer Electronics), and Geography - Global Forecast to 2025*. The smart glass market size is expected to grow from USD 3.8 billion in 2020 to USD 6.8 billion by 2025, at a CAGR of 12.1% during the forecast period. The growth of the smart glass industry is driven by factors, such as the growing adoption of smart glass in automotive application and, declining prices for electrochromic material. Other major driving factors for smart glass adoption include supportive government mandates and legislation on energy efficiency. Governing bodies of various countries are increasingly encouraging the use of these energy-efficient products.

Smart glass has inherent energy-saving and auto-dimming properties, which reduce its maintenance cost. As a result, the perceived benefits of these glass products are more than the incurred investments.

Crown believes that the smart glass industry is in the initial phase of growth and that DynamicTint™ may have commercial applicability in many products where variable light-control is desired.

Our Technology

DynamicTint™ combines many of the favorable properties of the other smart window technologies. It has fast-switching time and unlike electrochromic (EC) technology, modulation in light level is not area dependent and the film is neutral in color in all settings. Unlike Suspended Particles Devices (SPD) and Polymer Dispersed Liquid Crystal (PDLC) technology, EK film does not need high voltage alternating current to power the film. Because of the low power requirements, EK films can be powered with batteries or combined with small area solar cells, allowing retrofit to existing windows. Furthermore, in the future EK film could be made with other colorants and it is possible with modification to the design to use two colorants in the same film, which has been demonstrated in the recent past under a research project at the University of Cincinnati. Below is a table outlining some of the typical properties of each technology.

Other Smart Glass Technologies

Variable light transmission technologies can be classified into two basic types: “active” technologies that can be controlled electrically by the user either automatically or manually, and “passive” technologies that can only react to ambient environmental conditions such as changes in lighting or temperature. Most of the technologies are “active”. One type that is passive is thermochromic technology where a rise in temperature will darken the film applied to glass.

The Company believes that our DynamicTint has certain performance advantages over other “smart glass” technologies and that pricing and product performance are the two main factors critical to the adoption of smart glass products. Because the non-EK smart glass technologies listed below do not have published, consistent pricing or cost data that can be relied upon, the Company cannot accurately report its price position relative to these other technologies. In terms of product performance, the Company believes that DynamicTint offers numerous advantages over other smart glass technologies as discussed below.

Technology	Can Retrofit	Power Usage	Can Tint to Black	Solar or Battery Powered	Tint Transition Speed	Light Transmission
DynamicTint™ (Electrokinetic)	✓	<0.01 W/M2	✓	✓	approx. 2 sec	3.0% - 70% or 0.4% - 50%
Electrochromic (EC)	×	0.3 - 2 W/M2 (30X EK)	×	×	5-40 min	<1% - 58%
Suspended Polymers in Particles (SPD) ¹	×	1.1 W/M2 at 100V/50hz (110X EK)	×	×	<3 sec	0.8% - 55%
Polymer Dispersed Liquid Crystal (PDLC)	×	5 - 20 W/M2 (500X EK)	×	×	1 - 3 sec	~80%

Ref. 1: SPD Film - LCF-1103DHA90 Showa Denko Material Co.

Electrochromic Glass

Electrochromic (EC) glass technology has been used as a light absorbing technology for rear view mirrors in automobiles for decades, and more recently for large-scale windows. However, the EC technology developed for windows is based on a different set of materials that are directly deposited on the heat-treated glass panels. All the current EC companies are using tungsten oxide as the main component involved in the color transition from clear to blue. Because of the nature of the chemical transition of the tungsten oxide, the EC film does not absorb as much of the blue light and so remaining light will have a strong blue hue both in the room and looking through the window. The speed of the switching time from dark to light or the reverse change is directly related to the size of the window area and the electrode design which brings electrical current to the EC material to start the chemical transition. EC technology is basically a battery-like material that requires “charging and discharging”. The time to charge/discharge the EC material in a large window can take up to 40 minutes to change from the dark state to the clear state at nominal temperatures. Also, during switching of the EC film, there can be non-uniform areas which can vary in level of tint from center to edge. The larger the area of the window, the more non-uniform during the change of state. Longer switching time can minimize the non-uniform areas. The EC materials are typically vacuum deposited directly on “defect-free” glass. The typical investment required for a large window electrochromic factory can run into the hundreds of millions of dollars, due to the large-scale vacuum equipment required, low particulate cleanroom required, and the relatively slow speed of deposition for all the various layers. Halio, formerly Kinestral Technologies, is using a chemical liquid deposition technique to replace some of the vacuum deposition steps to lower the capital investment needed for manufacturing.

Suspended Particle Glass (SPD)

SPD is a film that has suspended long and narrow particles in an encapsulated liquid polymer film with layers of ITO on either side to allow generation of an alternating current electrical field to twist the particles from a random state to a near vertical state perpendicular to the ITO plane. In the vertical state light passes through the film and in the random state the light is absorbed by the particles. The color of the film is blue since the particles used in the film do not absorb blue light as well as other colors of sunlight. No other types of particles have been created for this type of device. The film responds quickly to the electrical field, however, requires constant high AC voltage to hold the clear state. The film is manufactured on plastic and uses roll-to-roll (R2R) equipment processing. Also, because the particles are aligned when in the clear state, the film has a limited viewing angle much like older liquid-crystal displays. When viewed at a side angle, the film will appear darker. The current market for SPD has been mainly automobile sunroofs where the viewing angle of the passengers is relatively fixed at nearly perpendicular angle to the SPD film.

Polymer-Dispersed Liquid Crystal (PDLC) Film

PDLC requires an AC electric field like the SPD film described above to achieve a clear state. However, the liquid-crystal based film can only scatter light in the power-off state, therefore, most of the incoming light is transmitted through the film (~80%). Typically, the PDLC film is used for interior windows or doors to create privacy. PDLC has similar manufacturing methods using R2R equipment and plastic film with ITO conductor to the SPD film. The film is available from many Far East manufacturing companies with some able to make ~150 cm width film. The quality of the film can vary based on the manufacturing company. The film was invented at Kent State University in the 1980's and the patents have expired.

Competition

Several smart glass competitors have an operating history, including:

- SAGE Electrochromic, Inc., a wholly owned subsidiary of Saint-Gobain, which develops and manufactures electrochromic glass;
- View Glass [NASDAQ: VIEW] and Halio, formerly Kinestral Technologies, manufacture electrochromic glass at their purpose-built manufacturing facilities and both are headquartered in California; and
- Research Frontiers, Inc. [NASDAQ: REFR] licenses an electronically controlled tinted film, utilizing SPD technology, to various companies.

Crown Electrokinetics expects that other competitors will emerge in the future.

Research and Development

Crown has been using a 6” width R2R equipment capable of handling the deposition, embossing and lamination steps of the manufacturing process for its research and development for the past three years. Crown will have its proto-manufacturing roll-to-roll equipment at 12” width available in 2022. Production prototypes for qualification and system testing will be sourced from the 12” equipment in 2022. Crown will utilize the 12” width film for the first generation Smart Window Insert. Larger scale manufacturing is planned at a minimum of 36” width film to address markets including appropriately sized commercial building window inserts, larger format skylights inserts, and many automobile sunroofs. Thereafter, Crown will develop capability to manufacture DynamicTint film of at least 72” width capability. This will allow Crown to address the vast majority of window sizes for most applications.

As a result of the Company’s research and development efforts, the Company believes that its EK technology is now, or with additional development will become, usable in a number of commercial products. Such products may include one or more of the following fields: “smart” windows, doors, skylights and partitions; self-dimmable automotive sunroofs, windows, sun visors, and mirrors.

The Company has devoted most of its financial resources to research and development activities with the goal of producing commercially viable EK products and has developed working samples of its EK technology.

Crown’s main goals in its research and development include:

- developing wider ranges of light transmission,
- reducing the voltage required to operate DynamicTint,
- obtaining data and developing improved materials regarding environmental stability and longevity, and
- quantifying the degree of energy savings expected by users of the Company’s technology.

Employees

The Company has sixteen full-time employees and one advisor. Thirteen of the employees are technical personnel with one active technical consultant, and the rest perform business development, legal, finance, marketing, investor relations, and administrative functions. Crown’s employees have extensive industrial experience in leading technology, EV, glass, and ink-based manufacturing companies. The success of the Company is dependent upon, among other things, the services of its senior management, the loss of which could have a material adverse effect upon the prospects of the Company. None of our employees are represented by a labor union or covered by a collective bargaining agreement.

As Crown continues to grow, we will add additional manufacturing engineering, marketing, and administrative personnel.

Our Corporate Information

Crown’s primary business location is the R&D and Manufacturing facility located at 1110 NE Circle Blvd, Corvallis, OR 97330. Crown also has an office located at 11601 Wilshire Blvd Suite 2240 Los Angeles, CA. Our telephone number is +1 (800) 674-3612 and our Internet website address is www.crownek.com. Crown was incorporated in the State of Delaware on April 20, 2015.

ITEM 1A. RISK FACTORS.

Investing in our common stock involves a high degree of risk. You should carefully consider each of the following risks, together with all other information set forth in this Annual Report on Form 10-K, including the financial statements and the related notes and “Management’s Discussion and Analysis of Financial Conditions and Results of Operations”, before making a decision to purchase, hold or sell our common stock. The occurrence of any of the following risks could harm our business, financial condition, results of operations and/or growth prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. If any of the following risks actually occurs, our business, financial condition, results of operations and future growth prospects would likely be materially and adversely affected. In these circumstances, the market price of our common stock would likely decline and you may lose all or part of your investments. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risk Factors Summary

Risks Related to Our Business

- We may require additional funding to sustain our ongoing operations and to continue our research and development activities.
- We have a history of operating losses.
- We may not generate sufficient cash flows to cover our operating expenses.
- We have never declared a cash dividend and do not intend to declare a cash dividend in the foreseeable future.
- We do not directly manufacture products using Electrokinetic technology. We currently rely upon the activities of our partners and their customers in order to be profitable.
- Electrokinetic products face intense competition, which could affect our ability to increase our revenues.
- Declining production of automobiles and real estate could harm our business.
- We are dependent on key personnel.
- We are dependent on electrokinetic technology.
- Our patents and other protective measures may not adequately protect our proprietary intellectual property, and we may be infringing on the rights of others.
- The extent to which the COVID-19 outbreak impacts our business, results of operations and financial condition will depend on future developments, which cannot be predicted.
- Our future growth and success is dependent upon the real estate industry’s willingness to adopt smart glass and specifically our products, especially in the smart glass market which we are targeting with DynamicTint™.
- Our new products and services may not be successful.
- If we are unable to establish and maintain confidence in our long-term business prospects among business customers, analysts and within our industries, then our financial condition, operating results, and business prospects may suffer materially.
- Our operating and financial results forecast relies in large part upon assumptions and analyses developed by us. If these assumptions or analyses prove to be incorrect, our actual operating results may be materially different from our forecasted results.
- Disruption of supply or shortage of materials, in particular for glass, could harm our business.
- Increases in cost of materials could harm our business.
- We may be unable to meet our growing production demand, product sales, delivery plans and servicing needs, or accurately project and manage this growth nationwide or internationally, which could harm our business and prospects.

- We rely on complex machinery for our operations, and production involves a significant degree of risk and uncertainty in terms of operational performance and costs.
- If our products fail to perform as expected our ability to develop, market and sell our products and services could be harmed.
- We may choose to or be compelled to undertake product recalls or take other similar actions, which could adversely affect our brand image and financial performance.
- We must successfully maintain and upgrade our information technology systems.
- We rely on certain third-party providers of licensed software and services integral to the operations of our business.
- Any unauthorized control or manipulation of our products' systems could result in loss of confidence in us and our products and harm our business.
- If our security controls are breached or unauthorized or inadvertent access to business customers' information or other data are otherwise obtained, our services may be perceived as insecure, we may lose existing business customers or fail to attract new business customers, our business may be harmed, and we may incur significant liabilities.
- Our products and our website, systems, and data we maintain may be subject to intentional disruption, other security incidents, or alleged violations of laws, regulations, or other obligations relating to data handling that could result in liability and adversely impact our reputation and future sales.
- Our products and services are subject to substantial regulations, which are evolving, and unfavorable changes or failure by us to comply with these regulations could substantially harm its business and operating results.
- We are subject to various government regulations that could impose substantial costs upon us and negatively impact our ability to operate our manufacturing facility.
- Many of our products must comply with local building codes and ordinances, and failure of our products to comply with such codes and ordinances may have an adverse effect on its business.
- Compliance with the regulations of the OSHA can be costly, and non-compliance with such requirements may result in potentially significant monetary penalties, operational delays, negative publicity and adverse effect on our financial condition.
- We are subject to labor and employment laws and regulations, which could increase our costs and restrict our operations in the future.
- We may fail to obtain or maintain necessary licenses or otherwise fail to comply with applicable laws and regulations.
- We are subject to requirements relating to environmental and safety regulations and environmental remediation matters which could adversely affect its business, results of operation and reputation.
- Our insurance strategy may not be adequate to protect us from all business risks.
- Our current and future warranty reserves may be insufficient to cover future warranty claims which could adversely affect our financial performance.
- Our business may be adversely affected by any disruptions caused by union activities.
- Adverse developments in the credit markets may impair our ability to secure debt financing.
- Loss of a major customer could result in a decrease in our future sales and earnings.
- If we are unable to achieve our targeted manufacturing costs for our products, our financial condition and operating results will suffer.
- We are exposed to fluctuations in currency exchange rates, which could affect our financial results.
- We are subject to collection risks.
- Future transactions could pose risks.

Risks Related to our Common Stock

- If the trading price of our common stock fails to comply with the continued listing requirements of the NASDAQ Capital Market, we would face possible delisting, which would result in a limited public market for our common stock and make obtaining future debt or equity financing more difficult for us.
- If our shares of common stock become subject to the penny stock rules, it would become more difficult to trade our shares.
- Our stock price may be volatile, which could result in substantial losses to investors and litigation.
- The sale or availability for sale of substantial amounts of our common stock could adversely affect the market price of our common stock.
- We are controlled by a small group of our existing stockholders, whose interests may differ from other stockholders. Our executive officers and directors will significantly influence our activities, and their interests may differ from your interests as a stockholder.
- Our certificate of incorporation and bylaws, and certain provisions of Delaware corporate law, contain provisions that could delay or prevent a change in control even if the change in control would be beneficial to our stockholders.
- If equity research analysts do not publish research or reports about our business, or if they issue unfavorable commentary or downgrade our common stock, the market price of our common stock will likely decline.
- As a newly Nasdaq-listed company, we will incur material increased costs and become subject to additional regulations and requirements.
- We do not anticipate paying any dividends on our common stock for the foreseeable future.
- If we fail to develop and maintain proper and effective internal control over financial reporting, our ability to produce timely and accurate financial statements, comply with applicable laws and regulations, or access the capital markets could be impaired.
- We are an “emerging growth company” as defined in the JOBS Act and a “smaller reporting company” as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act, and are able to avail itself of reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies, which could make our common stock less attractive to investors and adversely affect the market price of our common stock in the future.
- We are required by Section 404 of the Sarbanes-Oxley Act to evaluate the effectiveness of its internal control over financial reporting. If we are unable to achieve and maintain effective internal controls, our operating results and financial condition could be harmed.

Risks Related to Our Business

Source and Need for Capital.

As we take steps in the commercialization and marketing of our technology or respond to potential opportunities and/or adverse events, our working capital needs may change. We anticipate that if our cash and cash equivalents are insufficient to satisfy our liquidity requirements, we will require additional funding to sustain our ongoing operations and to continue our research and development activities.

We have funded most of our activities through sales of our securities to investors. Eventual success of the Company and generation of positive cash flow will be dependent upon the extent of commercialization of products using the Company’s technology. We can give no assurances that we will generate sufficient cash flows in the future (through sales of our common stock, exercise of options and warrants, royalty fees, or otherwise) to satisfy our liquidity requirements or sustain future operations, or that additional funding, if required, will be available when needed or, if available, on favorable terms.

History of Operating Losses.

We have experienced net losses from operations, and we may continue to incur net losses from operations in the future. We have incurred substantial costs and expenses in researching and developing our electrokinetic technology. As of December 31, 2022, we had a cumulative net loss of \$88.0 million since our inception. Our net loss was approximately \$14.4 million for the year ended December 31, 2022. This includes non-cash accounting charges during the year ended December 31, 2022 of approximately \$2.6 million, resulting from stock-based compensation expenses related to our stock options and restricted stock, loss on issuance of debt, and depreciation and amortization. Our net loss was approximately \$16.5 million for the nine months ended December 31, 2021. Non-cash accounting charges for the nine months ended December 31, 2021 were \$8.5 million resulting from stock-based compensation expenses related to our stock options and depreciation and amortization offset by the gain on forgiveness of our PPP loan.

We expect to continue to incur losses from operations and negative cash flows, which raise substantial doubt about our ability to continue as a Going Concern.

We anticipate incurring additional losses until such time, if ever, that we can obtain marketing approval to sell, and then generate significant sales, of our technology that is currently in development. Substantial additional financing will be needed by the Company to fund our operations and to develop and commercialize our technology. These factors raise substantial doubt about the Company's ability to continue as a going concern.

We will seek to obtain additional capital through the sale of debt or equity financings or other arrangements to fund operations; however, there can be no assurance that we will be able to raise needed capital under acceptable terms, if at all. The sale of additional equity may dilute existing stockholders and newly issued shares may contain senior rights and preferences compared to currently outstanding shares of common stock. Issued debt securities may contain covenants and limit our ability to pay dividends or make other distributions to stockholders. If we are unable to obtain such additional financing, future operations would need to be scaled back or discontinued. Due to the uncertainty in the Company's ability to raise capital, we believe that there is substantial doubt in our ability to continue as a going concern.

We may not generate sufficient cash flows to cover our operating expenses.

As noted above, we have incurred recurring losses since inception and expect to continue to incur losses as a result of costs and expenses related to our research and continued development of our technology and our corporate general and administrative expenses. Our limited capital resources and operations to date have been substantially funded through sales of our securities. As of December 31, 2022, we had working capital of approximately -\$3.3 million, cash of approximately \$0.8 million, shareholders' equity of approximately \$0.5 million and an accumulated deficit of approximately \$88.0 million. In the event that we are unable to generate sufficient cash from our operating activities or raise additional funds, we may be required to delay, reduce or severely curtail our operations or otherwise impede our on-going business efforts, which could have a material adverse effect on our business, operating results, financial condition and long-term prospects.

We have never declared a cash dividend and do not intend to declare a cash dividend in the foreseeable future.

We have never declared or paid cash dividends on our common stock. Payment of dividends on our common stock is within the discretion of our Board of Directors and will depend upon our future earnings, capital requirements, financial condition and other relevant factors. We do not anticipate declaring or paying any cash dividends on our common stock in the foreseeable future.

We currently rely upon our vendors to provide elements of the manufacturing tooling.

We currently depend upon the activities of our vendors to provide certain tooling elements of our manufacturing process. We do not have full control over their processes which may mean risks in the form of delivery timing and quality of tooling components.

Electrokinetic products face intense competition, which could affect our ability to increase our revenues.

The market for electrokinetic products is intensely competitive and we expect competition to increase in the future. We compete based on the functionality and the quality of our product. Many of our current and potential competitors have significantly greater financial, technical, marketing and other resources than we have. In addition, many of our competitors have well-established relationships with our current and potential customers and have extensive knowledge of our industry. If our competitors develop new technologies or new products, improve the functionality or quality of their current products, or reduce their prices, and if we are unable to respond to such competitive developments quickly either because our research and development efforts do not keep pace with our competitors or because of our lack of financial resources, we may be unable to compete effectively.

Declining production of automobiles and real estate could harm our business.

Our commercialization efforts could be negatively impacted if the global production of automobiles and real estate construction declines significantly. If such commercialization is reduced, our revenues, results of operations and financial condition could be negatively impacted.

We are dependent on key personnel.

Our continued success will depend, to a significant extent, on the services of our directors, executive management team, key personnel and certain key scientists. If one or more of these individuals were to leave the Company, there is no guarantee that we could replace them with qualified individuals in a timely or economically satisfactory manner or at all. The loss or unavailability of any or all of these individuals could harm our ability to execute our business plan, maintain important business relationships and complete certain product development initiatives, which would have a material adverse effect on our business, results of operations and financial conditions.

Dependence on electrokinetic technology.

Because electrokinetic technology is the only technology we work with, our success depends upon the viability of electrokinetic technology which has yet to be fully proven. We have not fully ascertained the performance and long-term reliability of our technology, and therefore there is no guarantee that our technology will be successfully incorporated into all of the products which we are targeting for use of electrokinetic technology. We expect that different product applications for electrokinetic technology will have different performance and reliability specifications. We expect that our licensees will primarily be responsible for reliability testing, but that we may also continue to do reliability testing so that we can more effectively focus our research and development efforts toward constantly improving the performance characteristics and reliability of products using electrokinetic technology.

Our patents and other protective measures may not adequately protect our proprietary intellectual property, and we may be infringing on the rights of others.

Our intellectual property, particularly our proprietary rights in our electrokinetic technology, is critical to our success. We have acquired various patents, and filed other patent applications, for various applications and aspects of our electrokinetic technology. In addition, we generally enter into confidentiality and invention agreements with our employees and consultants. Such patents and agreements and various other measures we take to protect our intellectual property from use by others may not be effective for various reasons generally applicable to patents and their granting and enforcement. In addition, the costs associated with enforcing patents, confidentiality and invention agreements or other intellectual property rights may be expensive. Our inability to protect our proprietary intellectual property rights or gain a competitive advantage from such rights could harm our ability to generate revenues and, as a result, our business and operations.

The extent to which the coronavirus (“COVID-19”) outbreak impacts our business, results of operations and financial condition will depend on future developments, which cannot be predicted.

The COVID-19 pandemic has caused us to modify our business practices (including employee travel, employee work locations, and cancellation of physical participation in meetings, events and conferences), and we may take further actions as may be required by government authorities or that we determine are in the best interests of our employees, customers and business partners. There is no certainty that such measures will be sufficient to mitigate the risks posed by the virus or otherwise be satisfactory to government authorities.

The extent to which COVID-19 impacts our business, results of operations and financial condition will depend on future developments, which are uncertain and cannot be predicted, including, but not limited to, the duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. Even after the coronavirus outbreak has subsided, we may continue to experience materially adverse impacts to our business as a result of its global economic impact, including any recession that has occurred or may occur in the future.

Our future growth and success is dependent upon the real estate industry’s willingness to adopt smart glass and specifically our products, especially in the smart glass market which we are targeting with DynamicTint™.

Our growth is highly dependent upon the adoption of smart glass by the real estate industry. Although we anticipate growing demand for our products, there is no guarantee of such future demand, or that our products will remain competitive in the market.

If the market for smart glass in general and our products in particular do not develop as we expect, or develop more slowly than we expect, or if demand for our products decreases in our markets, our business, prospects, financial condition and operating results could be harmed. The market for our products could be affected by numerous factors, such as:

- perceptions about smart glass features, quality, safety, performance and cost;
- competition, including from other types of smart glass or traditional glass;
- the cost premium of smart glass in contrast to traditional glass;
- government regulations and economic incentives;
- reduced construction activity, including as a result of the short and long-term effect of COVID-19; and
- concerns about our future viability.

Our new products and services may not be successful.

We announced our first smart glass product in 2020 and we anticipate launching additional products and services in the future. Existing and new products and services we may launch in the future may not be well received by our business customers, may not help us to generate new business customers, may adversely affect the attrition rate of existing business customers, may increase our business customer acquisition costs and may increase the costs to service our business customers. Any profits we may generate from these or other new products or services may be lower than profits generated from our other products and services and may not be sufficient for us to recoup our development or business customer acquisition costs incurred. New products and services may also have lower gross margins, particularly to the extent that they do not fully utilize our existing infrastructure. In addition, new products and services may require increased operational expenses or business customer acquisition costs and present new and difficult technological and intellectual property challenges that may subject us to claims or complaints if business customers experience service disruptions or failures or other quality issues. To the extent our new products and services are not successful, it could have a material adverse effect on our business, financial condition, cash flows or results of operations.

If we are unable to establish and maintain confidence in our long-term business prospects among business customers, analysts and within our industries, then our financial condition, operating results, and business prospects may suffer materially.

Business customers may be less likely to purchase our products if they are not convinced that our business will succeed or that our service and support and other operations will continue in the long term. Similarly, suppliers and other third parties will be less likely to invest time and resources in developing business relationships with us if they are not convinced that its business will succeed. Accordingly, in order to build and maintain its business, we must maintain confidence among business customers, suppliers, analysts, ratings agencies and other parties in our long-term financial viability and business prospects. Maintaining such confidence may be complicated by certain factors, such as our limited operating history, negative press, business customer unfamiliarity with our products, any delays in scaling manufacturing, delivery and service operations to meet demand, competition and uncertainty regarding the future of smart glass or our other products and services, our quarterly production and sales performance compared with market expectations, and any other negative publicity related to us. Many of these factors are largely outside our control, and any negative perceptions about our long-term business prospects, even if exaggerated or unfounded, such as speculation regarding the sufficiency or stability of our management team, could harm our business and make it more difficult to raise additional funds if needed.

Our operating and financial results forecast relies in large part upon assumptions and analyses developed by us. If these assumptions or analyses prove to be incorrect, our actual operating results may be materially different from our forecasted results.

Our projected financial and operating information reflect current estimates of future performance. Whether actual operating and financial results and business developments will be consistent with our expectations and assumptions as reflected in our forecasts depends on a number of factors, many of which are outside our control, including, but not limited to:

- market acceptance of our products;
- success and timing of development activity;
- competition, including from established and future competitors;
- our ability to manage our growth;
- our ability to satisfy the manufacturing and production demands associated with customer orders;
- whether we can manage relationships with key suppliers;
- our ability to retain existing key management, integrate recent hires and attract, retain and motivate qualified personnel; and
- the overall strength and stability of domestic and international economies.

Unfavorable changes in any of these or other factors, most of which are beyond our control, could materially and adversely affect our business, results of operations and financial results.

Disruption of supply or shortage of materials, in particular for glass, could harm our business.

Our business is dependent on the continued supply of certain materials, including glass, acrylic, as well as other chemicals such as indium tin oxide, certain pigments and polyethylene for use in our products, and we may experience a sustained interruption in the supply or shortage of such materials. Any such supply interruption or shortage could materially and negatively impact our business, prospects, financial condition and operating results. The available supply may be unstable, depending on market conditions and global demand for these materials and could adversely affect our business and operating results.

Increases in cost of materials could harm our business.

Certain materials necessary to produce our products, including glass, acrylic, as well as other chemicals such as indium tin oxide, certain pigments and polyethylene, are sourced from a limited number of suppliers. Any disruption in the supply of materials from such suppliers could disrupt production of our products until such time as a different supplier is fully qualified. As a result, we may experience an increase in costs or inability to meet customer demand. Furthermore, shortages or increased demand of such materials and other economic conditions may cause us to experience significant increases in freight charges and the cost of materials. Substantial increases in the prices for our materials or prices charged to us would increase our operating costs and could reduce our margins if we cannot recoup the increased costs through increased product prices. Any attempts to increase product prices in response to increased material costs could result in cancellations of product orders and reservations and therefore materially and adversely affect our brand, image, business, prospects and operating results.

We may be unable to meet our growing production demand, product sales, delivery plans and servicing needs, or accurately project and manage this growth nationwide or internationally, which could harm our business and prospects.

In the past, we've experienced, and we may experience in the future, delays or other complications in the design, manufacture, launch, and production ramp of our products, including DynamicTint™ or may not realize our manufacturing cost targets, which could harm our brand, business, prospects, financial condition and operating results. Our manufacturing facility may require significant cash investments and management resources for these plans, and we may not meet our expectations with respect to additional sales of our products. In addition, we've introduced in the past, and we may introduce in the future, new manufacturing technologies, techniques and processes. There is no guarantee that we will be able to successfully and timely introduce and scale any such new processes or features.

Our production plans for our products are based on many key assumptions, including:

- **Ability to utilize manufacturing capacity to achieve the planned production yield.** We assume that we will be able to sustain and further expand our high-volume production and our products at our Corvallis and Salem facilities, including with the introduction of new product features, without exceeding our projected costs and on our projected timeline; and
- **Suppliers' ability to support our needs.** We assume that we will be able to maintain suppliers for the necessary components on terms and conditions that are acceptable to us and that we will be able to obtain high-quality components on a timely basis and in the necessary quantities to support high-volume production.

If one or both of the foregoing assumptions turns out to be incorrect, our ability to meet our projections, including for production, on time and at volumes and prices that are profitable, the demand for and deliveries of our products, as well as our business, prospects, operating results and financial condition, may be materially and adversely impacted.

Concurrent with developing, launching and ramping our products, our success will depend on our ability to continue to significantly increase our sales, deliveries, and servicing, while allocating our available resources among multiple products simultaneously. Although we have a plan for selling and delivering increased volumes of our products, we have limited experience developing, manufacturing, selling, servicing and allocating our available resources at the scale to which we expect to grow. If we are unable to realize our plans, our brand, business, prospects, financial condition and operating results could be materially damaged.

We continuously evaluate, and as appropriate evolve, our operations and product offerings in order to maximize our reach and optimize our costs. However, there is no guarantee that each step in our evolving strategy will be perceived as intended by developers, tenants, and the construction industry. Likewise, as we develop and grow our products and services in North America, and possibly worldwide, our success will depend on our ability to correctly forecast demand in different markets.

We may also face difficulties meeting our sales and delivery goals in both existing markets as well as new markets into which we expand. There is no assurance that we will be able to ramp our business to meet our sales and delivery targets in North America or even globally, or that our projections on which such targets are based will prove accurate. This ongoing expansion in North America and potentially internationally, which includes planned entry into markets in which we have limited or no experience selling, delivering, and servicing our products at scale, and which may pose legal, regulatory, labor, cultural and political challenges that we have not previously encountered, may not have the desired effect of increasing sales and expanding our brand presence to the degree we are anticipating. Moreover, we may not be successful in managing our national and future international operations if we are unable to avoid cost overruns and other unexpected operating costs, adapt our products and conduct our operations to meet local requirements and regulations, implement required local infrastructure, systems and processes, and find and hire as needed additional sales, service, construction and administrative personnel. If we fail to manage our growth effectively, it could result in negative publicity and damage to our brand and have a material adverse effect on our business, prospects, financial condition and operating results.

We rely on complex machinery for our operations, and production involves a significant degree of risk and uncertainty in terms of operational performance and costs.

We rely heavily on complex machinery for our operations and the production of our products that suffers unexpected malfunctions from time to time and requires repairs and spare parts to resume operations, which may not be available when needed. Unexpected malfunctions of our production equipment may significantly affect intended operational efficiency. In addition, the operational performance and costs associated with this equipment can be difficult to predict and may be influenced by factors outside of our control, such as, but not limited to, failures by suppliers to deliver necessary machinery components in a timely manner and at prices and volumes acceptable to us, which could have a material adverse effect on our operational performance, cash flows, financial condition or prospects.

If our products fail to perform as expected, our ability to develop, market and sell our products and services could be harmed.

If our products contain defects in design and manufacture that cause them not to perform as expected or that require repair, or certain features of our products take longer than expected to become enabled or are legally restricted, our ability to develop, sell, and service our products could be harmed. Although we attempt to remedy any issues we observe in our products as effectively and rapidly as possible, such efforts may not be timely, may hamper production or may not be to the satisfaction of our business customers. While we perform extensive internal testing on the products we manufacture, we currently have a limited frame of reference by which to evaluate detailed long-term quality, reliability, durability and performance characteristics of our products. There can be no assurance that we will be able to detect and fix any defects in our products prior to their sale to business customers.

Our inability to provide products or services in a timely manner, legal restrictions on product features, or defects in our products or services, including products and services of third parties that we incorporate into our offerings, could adversely affect our reputation, result in delivery delays, product recalls, product liability claims, and significant warranty and other expenses, and subject us to claims or litigation. In addition, our inability to meet business customers' expectations with respect to our products or services could increase attrition rates or affect our ability to generate new business customers and thereby have a material adverse effect on our business, financial condition, cash flow or results of operations.

We may choose to or be compelled to undertake product recalls or take other similar actions, which could adversely affect our brand image and financial performance.

Any product recall with respect to our products may result in adverse publicity, damage our brand and adversely affect our business, prospects, operating results and financial condition. In the future, we may at various times, voluntarily or involuntarily, initiate a recall if any of our products prove to be defective or noncompliant with applicable laws and regulations. Such recalls, whether voluntary or involuntary or caused by systems or components engineered or manufactured by us or our suppliers, could involve significant expense and could adversely affect our brand image in our target markets, as well as our business, prospects, financial condition and results of operations.

We must successfully maintain and upgrade our information technology systems.

We rely on various information technology systems to manage our operations, including general, non-proprietary information technology systems in our facility and proprietary information technology systems in our products. As necessary, we implement modifications and upgrades to these systems, and replace certain of our legacy systems with successor systems with new functionality.

The technology and capital equipment we employ may become old or obsolete, which could require significant capital expenditures for upkeep and upgrade over time. Our products and services interact with the hardware and software technology of systems and devices located at our business customers' property. We may be required to implement new technologies or adapt existing technologies in response to changing market conditions, business customer preferences, industry standards or inability to secure necessary intellectual property licenses, which could require significant capital expenditures. Our inability to adapt to changing technologies, market conditions or subscriber preferences in a timely manner could have a material adverse effect on our business, financial condition, cash flows or results of operations.

There are inherent costs and risks associated with modifying or changing these systems and implementing new systems, including potential disruption of our internal control structure, substantial capital expenditures, additional administration and operating expenses, retention of sufficiently skilled personnel to implement and operate the new systems, demands on management time and other risks and costs of delays or difficulties in transitioning to new systems or of integrating new systems into our current systems. While management seeks to identify and remediate issues, we can provide no assurance that our identification and remediation efforts will be successful or that we will not encounter additional issues as we complete the implementation of these and other systems. In addition, our information technology system implementations may not result in productivity improvements at a level that outweighs the costs of implementation, or at all. The implementation of new information technology systems may also cause disruptions in our business operations and have an adverse effect on our business, cash flows and operations.

We rely on certain third-party providers of licensed software and services integral to the operations of our business.

Certain aspects of the operation of our business may depend on third-party software and service providers. With regard to licensed software technology, we may become dependent upon the ability of third parties to maintain, enhance or develop their software and services on a timely and cost-effective basis, to meet industry technological standards and innovations to deliver software and services that are free of defects or security vulnerabilities, and to ensure their software and services are free from disruptions or interruptions. Further, these third-party services and software licenses may not always be available to us on commercially reasonable terms or at all.

If the third-party software or services become obsolete, fail to function properly, are incompatible with future versions of our products or services, or are defective or otherwise fail to address our needs, there is no assurance that we would be able to replace the functionality provided by any future third-party software or services with software or services from alternative providers. Any of these factors could have a material adverse effect on our financial condition, cash flows or results of operations.

Any unauthorized control or manipulation of our products' systems could result in loss of confidence in us and our products and harm our business.

Our products contain complex information technology systems. We have designed, implemented and tested security measures intended to prevent unauthorized access to our information technology networks, our products and our systems. However, hackers may attempt to gain unauthorized access to modify, alter and use such networks, products and systems to gain control of, or to change, our products' functionality, user interface and performance characteristics, or to gain access to data stored in or generated by our products. We encourage reporting of potential vulnerabilities in the security of our products via our security vulnerability reporting policy, and we aim to remedy any reported and verified vulnerability. However, there can be no assurance that vulnerabilities will not be exploited in the future before they can be identified, or that our remediation efforts are or will be successful.

Any unauthorized access to or control of our products or their systems or any loss of data could result in legal claims or proceedings. In addition, regardless of their veracity, reports of unauthorized access to our products, their systems or data, as well as other factors that may result in the perception that our products, their systems or data are capable of being "hacked," could negatively affect our brand and harm our business, prospects, financial condition and operating results.

If our security controls are breached or unauthorized or inadvertent access to business customers' information or other data are otherwise obtained, our services may be perceived as insecure, we may lose existing business customers or fail to attract new business customers, our business may be harmed, and we may incur significant liabilities.

Our future products may involve the collection, storage, transmission and processing of personal, payment, credit and other confidential and private information of our business customers, and may in certain cases permit access to our business customers' property or help secure them. Such future products that may present privacy and data risks may be subject to privacy and data protection laws and regulations. We also maintain and process other confidential and proprietary information in our business, including our employees' and contractors' personal information and confidential business information. We rely on proprietary and commercially available systems, software, tools and monitoring to protect against unauthorized use or access of the information we process and maintain. Our services and the networks and information systems we utilize in our business are at risk for breaches as a result of third-party action, employee, vendor or partner error, malfeasance, or other factors. For example, we may experience instances of our employees, contractors and other third parties improperly accessing our and/or our business customers' systems and information in violation of our internal policies and procedures.

Criminals and other nefarious actors may use increasingly sophisticated methods, including cyberattacks, phishing, social engineering and other illicit acts to capture, access or alter various types of information, to engage in illegal activities such as fraud and identity theft, and to expose and exploit potential security and privacy vulnerabilities in corporate systems and websites. Unauthorized intrusion into the portions of our systems and networks and data storage devices that process and store business customers' confidential and private information, the loss of such information or the deployment of malware or other harmful code to our services or our networks or systems may result in negative consequences, including the actual or alleged malfunction of our products or services. In addition, third parties, including our partners and vendors, could also be sources of security risks to us in the event of a failure of their own security systems and infrastructure. The threats we face continue to evolve and are difficult to predict due to advances in computer capabilities, new discoveries in the field of cryptography and new and sophisticated methods used by criminals. There can be no assurances that our defensive measures will prevent cyber-attacks or that we will discover network or system intrusions or other breaches on a timely basis or at all. We cannot be certain that we will not suffer a compromise or breach of the technology protecting the systems or networks that house or access our products and services or on which our or our partners or vendors process or store personal information or other sensitive information or data, or that any such incident will not be believed or reported to have occurred. Any such actual or perceived compromises or breaches to systems, or unauthorized access to, or acquisition or loss of, data, whether suffered by us, our partners or vendors or other third parties, whether as a result of employee error or malfeasance or otherwise, could harm our business. They could, for example, cause interruptions in operations, loss of data, loss of confidence in our services and products and damage to our reputation and could limit the adoption of our services and products. They could also subject us to costs, regulatory investigations and orders, litigation, contract damages, indemnity demands and other liabilities and materially and adversely affect our business customer base, sales, revenue, and profits. Any of these could, in turn, have a material adverse impact on our business, financial condition, cash flows or results of operations.

Further, if a high profile security breach occurs with respect to another provider of smart glass, our existing and potential business customers may lose trust in the security of our services or in smart glass generally, which could adversely impact our ability to retain existing business customers or attract new ones. Even in the absence of any security breach, business customers' concerns about security, privacy or data protection may deter them from using our service. Our insurance policies covering errors and omissions and certain security and privacy damages and claim expenses may not be sufficient to compensate for all potential liability. Although we maintain cyber liability insurance, we cannot be certain that our insurance coverage will be adequate for liabilities actually incurred or that insurance will continue to be available to us on economically reasonable terms, or at all.

Our products and our website, systems, and data we maintain may be subject to intentional disruption, other security incidents, or alleged violations of laws, regulations, or other obligations relating to data handling that could result in liability and adversely impact our reputation and future sales.

We may face significant challenges with respect to information security and maintaining the security and integrity of our systems and other systems used in our business, as well as with respect to the data stored on or processed by these systems. Advances in technology, an increased level of sophistication, and an increased level of expertise of hackers, new discoveries in the field of cryptography or others can result in a compromise or breach of the systems used in its business or of security measures used in our business to protect confidential information, personal information, and other data.

The availability and effectiveness of our products, and our ability to conduct our business and operations, depend on the continued operation of information technology and communications systems, some of which we have yet to develop or otherwise obtain the ability to use. Systems used in our business, including data centers and other information technology systems, will be vulnerable to damage or interruption. Such systems could also be subject to break-ins, sabotage and intentional acts of vandalism, as well as disruptions and security incidents as a result of non-technical issues, including intentional or inadvertent acts or omissions by employees, service providers, or others. We anticipate using outsourced service providers to help provide certain services, and any such outsourced service providers face similar security and system disruption risks as us. Some of the systems used in our business will not be fully redundant, and our disaster recovery planning cannot account for all eventualities. Any data security incidents or other disruptions to any data centers or other systems used in our business could result in lengthy interruptions in our service.

Our products and services are subject to substantial regulations, which are evolving, and unfavorable changes or failure by us to comply with these regulations could substantially harm its business and operating results.

Smart glass is subject to substantial regulation under international, federal, state, and local laws. We incur significant costs in complying with these regulations and may be required to incur additional costs to comply with any changes to such regulations, and any failures to comply could result in significant expenses, delays, or fines. We may become subject to laws and regulations applicable to the supply, manufacture, import, sale and service of smart glass internationally. For example, in countries outside of the U.S., we may be required to meet standards relating to safety that are often materially different from requirements in the U.S., thus resulting in additional investment into the products and systems to ensure regulatory compliance in those countries. This process may include official review and certification of our products by foreign regulatory agencies prior to market entry, as well as compliance with foreign reporting and recall management systems requirements.

We are subject to various government regulations that could impose substantial costs upon us and negatively impact our ability to operate our manufacturing facility.

As a manufacturing company, including with respect to its facility in Corvallis, Oregon, we are and will be subject to complex environmental, manufacturing, health and safety laws and regulations, including laws relating to the use, handling, storage, recycling, disposal and human exposure to hazardous materials. The costs of compliance, including remediating contamination if any is found on our properties and any changes to our operations mandated by new or amended laws, may be significant. We may also face unexpected delays in obtaining permits and approvals required by such laws in connection with its manufacturing facility, which would hinder our operation of this and future facilities. Such costs and delays may adversely impact our business prospects and operating results. Furthermore, any violations of these laws may result in substantial fines and penalties, remediation costs, third party damages, or a suspension or cessation of our operations. We may also be subject to anti-corruption, anti-bribery, anti-money laundering, financial and economic sanctions, and similar laws. Non-compliance with such laws can subject us to administrative, civil, and criminal fines and penalties, collateral consequences, remedial measures and legal expenses, all of which could adversely affect our business, results of operations, financial condition and reputation.

There may be laws in jurisdictions we have not yet entered or laws we are unaware of in jurisdictions we have entered that may restrict our sales or other business practices. The laws in this area can be complex, difficult to interpret and may change over time. Continued regulatory limitations and other obstacles that may interfere with our ability to commercialize our products could have a negative and material impact on our business, prospects, financial condition, and results of operations.

Many of our products must comply with local building codes and ordinances, and failure of our products to comply with such codes and ordinances may have an adverse effect on its business.

Many of our products must comply with local building codes and ordinances. Building codes may also affect the products our customers are allowed to use, and, consequently, changes in building codes may also affect the sale of our products. These codes and ordinances are subject to future government review and interpretation. If our products fail to comply with such local building codes or ordinances, our ability to market and sell such products would be impaired. Also, should these codes and ordinances be amended or expanded, or should new laws and regulations be enacted, we could incur additional costs or become subject to requirements or restrictions that require us to modify our products or adversely affect our ability to market and sell our products. If our products do not adequately or quickly adapt to building standards, we may lose market share to competitors, which would adversely affect our business, results of operation, financial condition, and cash flows. Furthermore, failure of our products to comply with such codes or ordinances could subject it to negative publicity or damage its reputation.

Compliance with the regulations of the U.S. Occupational Safety and Health Administration (“OSHA”) can be costly, and non-compliance with such requirements may result in potentially significant monetary penalties, operational delays, negative publicity and adverse effect on our financial condition.

Our operations are subject to regulation under OSHA and other state and local laws and regulations. OSHA establishes certain employer responsibilities, including maintenance of a workplace free of recognized hazards likely to cause death or serious injury, compliance with standards promulgated by the applicable regulatory authorities and various recordkeeping, disclosure and procedural requirements. Changes to OSHA requirements, or stricter interpretation or enforcement of existing laws or regulations, could result in increased costs. If we fail to comply with applicable OSHA regulations, even if no work-related serious injury or death occurs, we may be subject to civil or criminal enforcement and be required to pay substantial penalties, incur significant capital expenditures or suspend or limit operations. Any such accidents, citations, violations, injuries or failure to comply with industry best practices may subject us to adverse publicity, damage our reputation and competitive position and adversely affect our business.

We have incurred, and we will continue to incur, capital and operating expenditures and other costs in the ordinary course of business in complying with OSHA and other state, local and foreign laws and regulations. While we have invested, and we will continue to invest, substantial resources in worker health and safety programs, there can be no assurance that we will avoid significant liability exposure. Personal injury claims for damages, including for bodily injury or loss of life, could result in substantial costs and liabilities, which could materially and adversely affect our financial condition, results of operations or cash flows. In addition, if our safety record were to substantially deteriorate, or if we suffered substantial penalties or criminal prosecution for violation of health and safety regulations, business customers could cancel existing contracts and not award future business to us, which could materially adversely affect our liquidity, cash flows and results of operations.

We are subject to labor and employment laws and regulations, which could increase our costs and restrict our operations in the future.

Our business is subject to a variety of employment laws and regulations and may become subject to additional requirements in the future. Although we believe we are in material compliance with applicable employment laws and regulations, in the event of a change in requirements, we may be required to modify our operations or to utilize resources to maintain compliance with such laws and regulations. Moreover, we may be subject to various employment-related claims, such as individual or class actions or government enforcement actions relating to alleged employment discrimination, employee classification and related withholding, wage-hour disputes, labor standards or healthcare and benefit issues. Our failure to comply with applicable employment laws and regulations and related legal actions against us may affect our ability to compete or have a material adverse effect on our business, financial condition, cash flows or results of operations.

We may fail to obtain or maintain necessary licenses or otherwise fail to comply with applicable laws and regulations.

Our business focuses on contracts and transactions with business customers and therefore is subject to a variety of laws, regulations and licensing requirements that govern our interactions with business customers, including those pertaining to privacy and data security, business customer financial transactions and warranties. Our business may become subject to additional such requirements in the future. In certain jurisdictions, we are also required to obtain licenses or permits to comply with standards governing marketing and sales efforts, servicing of business customers, monitoring station employee selection and training and to meet certain standards in the conduct of our business. These laws and regulations are dynamic and subject to potentially differing interpretations, and various legislative and regulatory bodies may expand current laws or regulations or enact new laws and regulations regarding these matters. We strive to comply with all applicable laws and regulations relating to our interactions with business customers. It is possible, however, that these requirements may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other rules or our practices. Our non-compliance with any such law or regulations could also expose us to claims, proceedings, litigation and investigations by private parties and regulatory authorities, as well as substantial fines and negative publicity, each of which may materially and adversely affect our business. Delays in obtaining, or failing to obtain, approvals or rights, such as permitting, interconnection, or land usage approvals or rights, could affect our business customers' builds. We may incur significant expenses to comply with such laws and regulations, and increased regulation of matters relating to our interactions with business customers could require us to modify our operations and incur significant additional expenses, which could have an adverse effect on our business, financial condition and results of operations. If we expand the scope of our products or services or our operations in new markets, we may be required to obtain additional licenses and otherwise maintain compliance with additional laws, regulations or licensing requirements.

Changes in these laws or regulations or their interpretation, as well as new laws, regulations or licensing requirements which may be enacted, could dramatically affect how we do business, acquire business customers, and manage and use information we collect from and about current and prospective customers and the costs associated therewith. In addition, federal, state and local governmental authorities have considered, and may in the future consider, implementing consumer protection rules and regulations, which could impose significant constraints on our sales channels.

We are subject to requirements relating to environmental and safety regulations and environmental remediation matters which could adversely affect its business, results of operation and reputation.

We are subject to federal, state and local environmental laws and regulations governing, among other things, solid and hazardous waste storage, treatment and disposal, and remediation of releases of hazardous materials. Our suppliers are also subject to federal, state and local environmental laws and regulations, and their use of hazardous materials may adversely impact their operations and the availability of raw materials. While we adapt our manufacturing and distribution processes to the environmental control standards of regulatory authorities, we cannot completely eliminate the risk of accidental contamination or injury from hazardous or regulated materials, including injury of its employees, individuals who handle its products, or others who claim to have been exposed to our products, nor can we completely eliminate the unanticipated interruption or suspension of operations at its facilities due to such events. We may be held liable for significant damages or fines in the event of contamination or injury, and such assessed damages or fines could have an adverse effect on its financial performance and results of operations.

There are capital, operating and other costs associated with compliance with these environmental laws and regulations. Environmental laws and regulations may become more stringent in the future, which could increase costs of compliance or require us to manufacture with alternative technologies and materials. Non-compliance with such regulations may include litigation, regulation, fines, increased insurance premiums, mandates to temporarily halt production, workers' compensation claims, or other actions that impact the company brand, finances, or ability to operate.

Our insurance strategy may not be adequate to protect us from all business risks.

We may be subject, in the ordinary course of business, to losses resulting from products liability, accidents, acts of God and other claims against us, for which we may have no insurance coverage. A loss that is uninsured or which exceeds policy limits may require us to pay substantial amounts, which could adversely affect our financial condition and operating results.

We are subject to all of the ordinary course operating hazards and risks that may come with the provision of our products and services and business operations. In addition to contractual provisions limiting our liability to business customers and third parties, we maintain insurance policies in such amounts and with such coverage and deductibles as required by law and that we believe are reasonable and prudent. Nevertheless, such insurance may not be adequate to protect us from all the liabilities and expenses that may arise from claims for personal injury, death or property damage arising in the ordinary course of our business and current levels of insurance may not be able to be maintained or be available at economical prices. If a significant liability claim is brought against us that is not covered by insurance, then we may have to pay the claim with our own funds, which could have a material adverse effect on our business, financial condition, cash flows or results of operations. We may not be able to secure additional product liability insurance coverage on commercially acceptable terms or at reasonable costs when needed, particularly if we do face liability for our products and are forced to make a claim under our policy.

Our current and future warranty reserves may be insufficient to cover future warranty claims which could adversely affect our financial performance.

If our warranty reserves are inadequate to cover future warranty claims on our products, our business, prospects, financial condition and operating results could be materially and adversely affected. We evaluate warranty reserves on an ongoing basis and record liabilities for matters in which losses are probable and the amount of loss can be reasonably estimated.

Our business may be adversely affected by any disruptions caused by union activities.

Although our employees are currently not unionized and we have not experienced any work stoppages since our inception, it is not uncommon for employees at manufacturing companies to belong to a union, which can result in higher employee costs and increased risk of work stoppages. Although we work diligently to provide the best possible work environment for our employees, our employees may decide to join or seek recognition to form a labor union in the future, or we may be required to become a union signatory. If a work stoppage occurs, it could delay the manufacture and sale of our products and have a material adverse effect on our business, prospects, operating results or financial condition.

Adverse developments in the credit markets may impair our ability to secure debt financing.

In past economic downturns, such as the financial crisis in the United States that began in mid-2007 and during other times of extreme market volatility, many commercial banks and other financial institutions stopped lending or significantly curtailed their lending activity. In addition, in an effort to stem losses and reduce their exposure to segments of the economy deemed to be high risk, some financial institutions limited routine refinancing and loan modification transactions and even reviewed the terms of existing facilities to identify bases for accelerating the maturity of existing lending facilities. The United States and global economies suffered dramatic downturns as a result of COVID-19, a deterioration in the credit markets and related financial crisis, as well as a variety of other factors including, among other things, extreme volatility in security prices, severely diminished liquidity and credit availability, ratings downgrades of certain investments and declining valuations of others. If these conditions recur or persist, it may be difficult for us to obtain desired financing to finance the growth of our investments on acceptable economic terms, or at all.

COVID-19 has, and until fully resolved could again, result in, among other things, increased draws by borrowers on revolving lines of credit and increased requests by borrowers for amendments, modifications and waivers of their credit agreements to avoid default or change payment terms, increased defaults by such borrowers and/or increased difficulty in obtaining refinancing at the maturity dates of their loans. The duration and effectiveness of responsive measures implemented by governments and central banks cannot be predicted. The commencement, continuation, or cessation of government and central bank policies and economic stimulus programs, including changes in monetary policy involving interest rate adjustments or governmental policies, may contribute to the development of or result in an increase in market volatility, illiquidity and other adverse effects that could negatively impact the credit markets and us.

If we are unable to consummate credit facilities on commercially reasonable terms, our liquidity may be reduced significantly. If we are unable to repay amounts outstanding under any facility we may enter into and are declared in default or are unable to renew or refinance any such facility, it would limit our ability to initiate significant originations or to operate our business in the normal course. These situations may arise due to circumstances that we may be unable to control, such as inaccessibility of the credit markets, a severe decline in the value of the U.S. dollar, a further economic downturn or an operational problem that affects third parties or us, and could materially damage our business. Moreover, we are unable to predict when economic and market conditions may become more favorable. Even if such conditions improve broadly and significantly over the long term, adverse conditions in particular sectors of the financial markets could adversely impact our business.

Loss of a major customer could result in a decrease in our future sales and earnings.

We anticipate that a limited number of customers in any given period may account for a substantial portion of our total net revenue for the foreseeable future. The business risks associated with this concentration, including increased credit risks for these and other customers and the possibility of related bad debt write-offs, could negatively affect our margins and profits. Additionally, the loss of a major customer, whether through competition or consolidation, or a disruption in sales to such a customer, could result in a decrease of our future sales and earnings.

If we are unable to achieve our targeted manufacturing costs for our products, our financial condition and operating results will suffer.

While we are continuing to and expect in the future to realize cost reductions by both us and our suppliers, including through increased production, there is no guarantee we will be able to achieve sufficient cost savings to reach our gross margin and profitability goals, or our other financial targets. We incur significant costs related to procuring the materials required to manufacture our products and compensating our personnel. If our efforts to continue to decrease manufacturing costs are not successful, we may incur substantial costs or cost overruns in utilizing and increasing the production capability of our manufacturing facility. Many of the factors that impact our manufacturing costs are beyond our control, such as potential increases in the costs of our materials and components. If we are unable to continue to control and reduce our manufacturing costs, our operating results, business and prospects will be harmed.

We are exposed to fluctuations in currency exchange rates, which could affect our financial results.

Foreign exchange rates are influenced by many factors outside of our control, including but not limited to: changing supply and demand for a particular currency, monetary policies of governments (including exchange-control programs, restrictions on local exchanges or markets and limitations on foreign investment in a country or an investment by residents of a country in other countries), changes in balances of payments and trade, trade restrictions and currency devaluations and revaluations. The resulting fluctuations in the exchange rates for the other currencies could have an adverse effect on our financial condition and results of operations.

We are subject to collection risks.

We may face normal collection risks with business customers and suppliers. If we fail to collect from our business customers, our business and operating results could be adversely affected.

Future transactions could pose risks.

We frequently evaluate strategic opportunities both within and outside our existing lines of business. We expect from time to time to pursue additional business opportunities and may decide to eliminate or acquire certain businesses, products or services. There are various risks and uncertainties associated with potential acquisitions and divestitures, including: (i) availability of financing; (ii) difficulties related to integrating previously separate businesses into a single unit, including product and service offerings, distribution and operational capabilities and business cultures; (iii) general business disruption; (iv) managing the integration process; (v) diversion of management's attention from day-to-day operations, (vi) assumption of costs and liabilities of an acquired business, including unforeseen or contingent liabilities or liabilities in excess of the amounts estimated; (vii) failure to realize anticipated benefits and synergies, such as cost savings and revenue enhancements; (viii) potentially substantial costs and expenses associated with acquisitions and dispositions; (ix) failure to retain and motivate key employees; and (x) difficulties in applying our internal control over financial reporting and disclosure controls and procedures to an acquired business. Any or all of these risks and uncertainties, individually or collectively, could have material adverse effect on our business, financial condition, cash flow or results of operations. We can offer no assurance that any such strategic opportunities will prove to be successful. Among other negative effects, our pursuit of such opportunities could cause our cost of investment in new business customers to grow at a faster rate than our recurring revenue and fees collected at the time of sale. Additionally, any new product or service offerings could require developmental investments or have higher cost structures than our current arrangements, which could reduce operating margins and require more working capital.

Risks Related to our Common Stock

If the trading price of our common stock fails to comply with the continued listing requirements of the NASDAQ Capital Market, we would face possible delisting, which would result in a limited public market for our common stock and make obtaining future debt or equity financing more difficult for us.

Companies listed on NASDAQ are subject to delisting for, among other things, failure to maintain a minimum closing bid price of \$1.00 per share for 30 consecutive business days. On September 1, 2022, we received a letter from The Nasdaq Stock Market LLC ("Nasdaq") indicating that for the previous 30 consecutive business days, the closing bid price of our common stock fell below the minimum \$1.00 per share requirement pursuant to Nasdaq Listing Rule 5550(a)(2) and 5810(c)(3)(A) (the "Nasdaq Listing Rules").

While the notification had no immediate effect on the listing of our common stock on Nasdaq, in accordance with the Nasdaq Listing Rules, we had 180 calendar days from the date of notification, or until February 28, 2023, to regain compliance with the minimum bid price requirement, during which time our common stock continued to trade on the Nasdaq Capital Market. On March 1, 2023, we received a letter from the Staff of Nasdaq notifying us that we had not regained compliance with the minimum bid price requirement as of February 28, 2023 and that we were not eligible for a second 180 day extension period. The Nasdaq Staff's letter noted that we were not in compliance with the \$5,000,000 stockholders' equity listing requirement for the Nasdaq Capital Market. Our stockholders' equity was \$2,746,000 as of September 30, 2022.

The Nasdaq Staff's letter informed us that, unless we request a hearing before a Nasdaq Hearings Panel (the "Panel") to appeal Nasdaq's delisting determination by 4:00 p.m. Eastern Time on March 8, 2023, our securities would be suspended from trading on, and delisted from, The Nasdaq Capital Market at the opening of business on March 10, 2023. On March 8, 2023, we requested a hearing before the Panel, which request stayed any further suspension or delisting action by Nasdaq pending completion of the hearing process and the expiration of any extension period that may be granted by the Panel, not to exceed 180 days from March 1, 2023. Although we are hopeful that we will be successful in our hearing before the Panel, there can be no guarantee that we will be successful or that we will be able to maintain our listing on Nasdaq.

Further, even if we are successful in our hearing before the Panel, we cannot guarantee that the price of our common stock will comply with the Nasdaq Listing Rules for continued listing on the Nasdaq Capital Market in the future.

If we cannot comply with the Nasdaq Listing Rules either now or in the future, our common stock would be subject to delisting and would likely trade on the over-the-counter market. If our common stock were to trade on the over-the-counter market, selling shares of our common stock could be more difficult because smaller quantities of shares would likely be bought and sold, transactions could be delayed, and security analysts' coverage of us may be reduced. In addition, broker-dealers have certain regulatory burdens imposed upon them, which may discourage broker-dealers from effecting transactions in shares of our common stock, further limiting the liquidity of our common stock. As a result, the market price of our common stock may be depressed, and you may find it more difficult to sell shares of our common stock. Such delisting from the NASDAQ Capital Market and continued or further declines in our stock price could also greatly impair our ability to raise additional necessary capital through equity or debt financing.

If our shares of common stock become subject to the penny stock rules, it would become more difficult to trade our shares.

The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stocks are generally equity securities with a price of less than \$5.00, other than securities registered on certain national securities exchanges or authorized for quotation on certain automated quotation systems, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system. If we do not retain a listing on the Nasdaq Capital Market (the “Exchange”) or another national securities exchange and if the price of our common stock is less than \$5.00, our common stock could be deemed a penny stock. The penny stock rules require a broker-dealer, before a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document containing specified information. In addition, the penny stock rules require that before effecting any transaction in a penny stock not otherwise exempt from those rules, a broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive (i) the purchaser’s written acknowledgment of the receipt of a risk disclosure statement; (ii) a written agreement to transactions involving penny stocks; and (iii) a signed and dated copy of a written suitability statement. These disclosure requirements may have the effect of reducing the trading activity in the secondary market for our common stock, and therefore stockholders may have difficulty selling their shares.

Our stock price may be volatile, which could result in substantial losses to investors and litigation.

In addition to changes to market prices based on our results of operations and the factors discussed elsewhere in this “Risk Factors” section, the market price of and trading volume for our common stock may change for a variety of other reasons, not necessarily related to our actual operating performance. The capital markets have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock. In addition, the average daily trading volume of the securities of small companies can be very low, which may contribute to future volatility. Factors that could cause the market price of our common stock to fluctuate significantly include:

- the results of operating and financial performance and prospects of other companies in our industry;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- announcements of innovations, increased service capabilities, new or terminated customers or new, amended or terminated contracts by our competitors;
- the public’s reaction to our press releases, other public announcements, and filings with the Securities and Exchange Commission;
- lack of securities analyst coverage or speculation in the press or investment community about us or market opportunities in the smart glass industry;

- changes in government policies in the United States and, as our international business increases, in other foreign countries;
- changes in earnings estimates or recommendations by securities or research analysts who track our common stock or failure of our actual results of operations to meet those expectations;
- market and industry perception of our success, or lack thereof, in pursuing our growth strategy;
- changes in accounting standards, policies, guidance, interpretations or principles;
- any lawsuit involving us, our services or our products;
- arrival and departure of key personnel;
- sales of common stock by us, our investors or members of our management team; and
- changes in general market, economic and political conditions in the United States and global economies or financial markets, including those resulting from natural or man-made disasters.

Any of these factors, as well as broader market and industry factors, may result in large and sudden changes in the trading volume of our common stock and could seriously harm the market price of our common stock, regardless of our operating performance. This may prevent you from being able to sell your shares at or above the price you paid for your shares, if at all. In addition, following periods of volatility in the market price of a company's shares, stockholders often institute securities class action litigation against that company. Our involvement in any class action suit or other legal proceeding could divert our senior management's attention and could adversely affect our business, financial condition, results of operations and prospects.

The sale or availability for sale of substantial amounts of our common stock could adversely affect the market price of our common stock.

Sales of substantial amounts of shares of our common stock after the completion of the offering, or the perception that these sales could occur, could adversely affect the market price of our common stock and could impair our future ability to raise capital through common stock offerings. Our executive officers and directors beneficially own, collectively, a substantial percentage of our outstanding common stock. If one or more of them were to sell a substantial portion of the shares they hold, it could cause our stock price to decline.

In addition, as of December 31, 2022, there were outstanding warrants to purchase an aggregate of 27,661,181 shares of our common stock at a weighted-average exercise price of \$0.75 per share, all of which were exercisable as of such date. As of December 31, 2022, we also had outstanding options to purchase 9,513,624 shares of our common stock, of which 8,579,370 have vested, with strike prices ranging from \$0.15 per share to \$5.49 per share. The exercise of options or warrants at prices below the market price of our common stock could adversely affect the price of shares of our common stock. Additional dilution may result from the issuance of shares of our capital stock in connection with acquisitions or in connection with other financing efforts. Any issuance of our common stock that is not made solely to then-existing stockholders proportionate to their interests, such as in the case of a stock dividend or stock split, will result in dilution to each stockholder.

We are controlled by a small group of our existing stockholders, whose interests may differ from other stockholders. Our executive officers and directors will significantly influence our activities, and their interests may differ from your interests as a stockholder.

Our executive officers and directors beneficially own, collectively, a substantial percentage of our outstanding common stock.

Accordingly, these stockholders have had, and will continue to have, significant influence in determining the outcome of any corporate transaction or any other matter submitted for approval to our stockholders, including mergers, consolidations and the sale of our assets, director elections and other significant corporate actions. They will also have significant influence in preventing or causing a change in control of our company. In addition, without the consent of these stockholders, we could be prevented from entering into transactions that could be beneficial to us. The interests of these stockholders may differ from your interests as a stockholder, and they may act in a manner that advances their best interests and not necessarily those of other stockholders.

Our certificate of incorporation and bylaws, and certain provisions of Delaware corporate law, contain provisions that could delay or prevent a change in control even if the change in control would be beneficial to our stockholders.

Delaware law, as well as our certificate of incorporation and bylaws, contain anti-takeover provisions that could delay or prevent a change in control of our company, even if the change in control would be beneficial to our stockholders. These provisions could lower the price that future investors might be willing to pay for shares of our common stock. These anti-takeover provisions:

- authorize our board of directors to create and issue, without stockholder approval, preferred stock, thereby increasing the number of outstanding shares, which can deter or prevent a takeover attempt;
- prohibit stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- establish a three-tiered classified board of directors requiring that not all members of our board be elected at one time;
- establish a supermajority requirement to amend our amended and restated bylaws and specified provisions of our amended and restated certificate of incorporation;
- prohibit cumulative voting in the election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- establish limitations on the removal of directors;
- empower our board of directors to fill any vacancy on our board of directors, whether such vacancy occurs as a result of an increase in the number of directors or otherwise;
- provide that our board of directors is expressly authorized to adopt, amend or repeal our bylaws;
- provide that our directors will be elected by a plurality of the votes cast in the election of directors;
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by our stockholders at stockholder meetings; and
- limit the ability of our stockholders to call special meetings of stockholders.

If equity research analysts do not publish research or reports about our business, or if they issue unfavorable commentary or downgrade our common stock, the market price of our common stock will likely decline.

The trading market for our common stock will rely in part on the research and reports that equity research analysts, over whom we have no control, publish about us and our business. We may never obtain research coverage by securities and industry analysts. If no securities or industry analysts commence coverage of our company, the market price for our common stock could decline. In the event we obtain securities or industry analyst coverage, the market price of our common stock could decline if one or more equity analysts downgrade our common stock or if those analysts issue unfavorable commentary, even if it is inaccurate, or cease publishing reports about us or our business.

As a newly Nasdaq-listed company, we will incur material increased costs and become subject to additional regulations and requirements.

As a newly Exchange-listed public company, we will incur material additional legal, accounting and other expenses including recruiting and retaining qualified independent directors, payment of annual Exchange fees, and satisfying Exchange standards for companies listed with it. Because our common stock is listed on the Exchange, we must meet certain financial and liquidity criteria to maintain such listing. If we violate Exchange listing requirements, our common stock may be delisted. If we fail to meet any of the Exchange's listing standards, our common stock may be delisted. In addition, our board of directors may determine that the cost of maintaining our listing on a national securities exchange outweighs the benefits of such listing. A delisting of our common stock from the Exchange may materially impair our stockholders' ability to buy and sell our common stock and could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock. The delisting of our common stock could significantly impair our ability to raise capital and the value of your investment.

We do not anticipate paying any dividends on our common stock for the foreseeable future.

We have not paid any dividends on our common stock to date, and we do not anticipate paying any such dividends in the foreseeable future. We anticipate that any earnings experienced by us will be retained to finance the implementation of our operational business plan and expected future growth.

If we fail to develop and maintain proper and effective internal control over financial reporting, our ability to produce timely and accurate financial statements, comply with applicable laws and regulations, or access the capital markets could be impaired.

As a public company, we have significant requirements for enhanced financial reporting and internal control over financial reporting. The process of designing and implementing effective internal control over financial reporting is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain internal control over financial reporting that is adequate to satisfy our reporting obligations as a public company. If we are unable to establish or maintain appropriate internal control over financial reporting, it could cause us to fail to meet our reporting obligations on a timely basis, result in material misstatements in our financial statements, increase compliance costs, negatively impact share trading prices, and otherwise harm its results of operations. In addition, we will be required, pursuant to Section 404(a) of the Sarbanes-Oxley Act, or Section 404, to furnish a report by management on our assessment of the effectiveness of our internal control over financial reporting in the second annual report following the completion of our offering completed in January 2021 and uplisting to the Exchange.

This assessment will need to include disclosure of any material weaknesses identified in our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. Testing and maintaining our internal control over financial reporting may divert our management's attention from other matters that are important to its business.

Our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting until after we are no longer an "emerging growth company" as defined in the JOBS Act. We may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404 or our independent registered public accounting firm may not issue an unqualified opinion. If either we are unable to conclude that we have effective internal control over financial reporting or our independent registered public accounting firm is unable to provide us with an unqualified report, investors could lose confidence in our reported financial information, which could have a material adverse effect on the trading price of our common stock.

We are an "emerging growth company" as defined in the JOBS Act and a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act, and are able to avail itself of reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies, which could make our common stock less attractive to investors and adversely affect the market price of our common stock in the future.

We are an "emerging growth company," as defined in the JOBS Act. We will remain an emerging growth company until the earlier of (i) the last day of our fiscal year in which we total annual gross revenue of at least \$1.07 billion; (ii) the last day of our first fiscal year following the fifth anniversary of our initial public offering; (iii) the date on which we have issued more than \$1 billion in non-convertible debt securities during the previous three years; or (iv) the date on which we are deemed to be a "large accelerated filer" under the rules of the SEC, which means the market value of our common stock that is held by non-affiliates exceeds \$700.0 million. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- not being required to comply with the auditor attestation requirements of Section 404;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board ("PCAOB") regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;

- providing only two years of audited financial statements in addition to any required unaudited interim financial statements and a correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure for certain filings;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholders approval of any golden parachute payments not previously approved.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early. Changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations. In addition, our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an “emerging growth company,” which may increase the risk that material weaknesses or significant deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as a “smaller reporting company” or an “emerging growth company,” we may elect not to provide stockholders or investors with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company.

We are a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue are more than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than \$700.0 million measured on the last business day of our second fiscal quarter.

We may choose to take advantage of some, but not all, of the available exemptions as an emerging growth company and a smaller reporting company. We will take advantage of reduced reporting burdens. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We are required by Section 404 of the Sarbanes-Oxley Act to evaluate the effectiveness of its internal control over financial reporting. If we are unable to achieve and maintain effective internal controls, our operating results and financial condition could be harmed.

We are an emerging growth company, and thus we are exempt from the auditor attestation requirement of Section 404(b) of Sarbanes-Oxley until such time as we no longer qualify as an emerging growth company. Regardless of whether we qualify as an emerging growth company, we will still need to implement substantial internal control systems and procedures in order to satisfy the reporting requirements under the Exchange Act and applicable requirements.

Risks Related to our Indebtedness

The requirement that we service our indebtedness could limit the cash flow available for our operations and have other consequences that could adversely affect our business, and we may not have sufficient cash flow from our business to pay our debt obligations.

As of December 31, 2022, we had outstanding \$5.4 million in aggregate principal amount of senior secured convertible notes due October 19, 2023. We may also incur additional indebtedness to meet future financing needs. Interest payments, fees, covenants and restrictions under agreements governing our current or future indebtedness, including the Notes, could have significant consequences, including the following: impairing our ability to successfully continue to commercialize our current or future products; limiting our ability to obtain additional financing on satisfactory terms; increasing our vulnerability to general economic downturns, competition and industry conditions; requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness; inhibiting our flexibility to plan for, or react to, changes in our business; and diluting the interests of our existing stockholders if we issue shares of our common stock upon conversion of the convertible Notes. The occurrence of any one of these events could have an adverse effect on our business, financial condition, operating results or cash flows and ability to satisfy our obligations under the indenture governing the Notes and any other indebtedness.

Our ability to make payments of the principal and interest on, or to refinance the amounts payable under, our current or future indebtedness, including the Notes, while still making necessary investments in our business, will depend on our operating and financial performance, including our ability to generate sufficient cash flow from operations, which may be subject to economic, financial, competitive and other factors beyond our control. If we are unable to generate such cash flow, we may be required to sell assets, restructure existing debt or obtain additional debt financing or equity capital on terms that may be onerous or highly dilutive. Our ability to refinance any future indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or secure desirable terms, which could result in a default on our debt obligations.

Our financial condition and results of operations could be adversely affected if we do not effectively manage our current or future debt.

As of December 31, 2022, we had \$5.4 million of outstanding indebtedness on a consolidated basis, which consists of the Notes. Our obligations related to our outstanding or any future indebtedness could adversely affect our ability to take advantage of corporate opportunities, which could adversely affect our business, financial condition, and results of operations, including, but not limited to, the following:

- our ability to obtain any necessary financing in the future for working capital, capital expenditures, debt service requirements, or other purposes may be limited, or financing may be unavailable;
- a substantial portion of our cash flows must be dedicated to the payment of principal and interest on our indebtedness and other obligations and will not be available for use in our business;
- lack of liquidity could limit our flexibility in planning for, or reacting to, changes in our business and the markets in which we operate;
- our debt obligations will make us more vulnerable to changes in general economic conditions and/or a downturn in our business, thereby making it more difficult for us to satisfy our obligations; and
- if we fail to make required debt payments or to comply with other covenants in our debt agreements, we would be in default under the terms of these agreements, which could permit our creditors to accelerate repayment of the debt and could cause cross-defaults under other debt agreements.

We may also incur additional indebtedness to meet future financing needs. If we incur any additional debt, the related risks that we and our subsidiaries face could intensify. Finally, we may in the future be in non-compliance with the terms of certain of our debt instruments. To the extent we are in non-compliance with the terms of such debt instruments, we may, among other things, be required to make payments to the holders of such instruments.

Our failure to comply with the covenants and other obligations contained in our Notes could trigger an event of default, which could materially and adversely affect our operating results and our financial condition.

Our Notes require us to comply with various operational and other covenants and obligations. Additionally, our senior secured convertible notes due October 19, 2023 require us to have available cash of at least \$500,000 at all times while such Notes remain outstanding. If we were unable to maintain a sufficient amount of available cash and comply with such other covenants and obligations, we would need to seek relief from the applicable holders of the Notes in order to avoid, cure or have waived an event of default under the applicable Notes. There can be no assurance that we would be able to obtain such relief on commercially reasonable terms or otherwise. If an event of default occurs and is not cured or waived, the Note holders could, among other things, cause all outstanding indebtedness under the applicable Notes to be due and payable immediately. There can be no assurance that our assets or cash flows would be sufficient to provide us with the liquidity to fund outstanding commitments or meet other business requirements or to enable us to fully repay those amounts or that we would be able to refinance or restructure the indebtedness.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

On March 8, 2016, the Company entered into a lease agreement with Oregon State University, to lease 1,700 square feet of office and laboratory space located at HP Campus Building 11, 1110 NE Circle Blvd, Corvallis, Oregon, for approximately \$400 monthly. On July 1, 2016, the Company entered into the first amendment to the lease agreement which increased the monthly lease expense to approximately \$1,200. On October 1, 2017, the Company entered into a sublease agreement, which provides for additional office space and the monthly lease payment increased to approximately \$1,800. The lease expired on June 30, 2018 and the Company extended the lease through June 30, 2019. The monthly lease payment increased to approximately \$4,500 for the months ended June 30, 2018 through November 30, 2018, and increased to approximately \$7,550 for the months ended December 31, 2018 through June 30, 2019. On July 1, 2019, the Company entered into the fourth amendment to its lease with Oregon State University, which extends the lease expiration date to June 30, 2022. On July 1, 2020, the Company entered into the fifth amendment to its lease with Oregon State University which adjusts the Operating Expense Reimbursement payment due dates from monthly to quarterly, with the payments due in advance on the first of July, October, January and April. Effective July 1, 2020, the quarterly operating expense will be \$23,097. On September 1, 2021, the Company entered into the seventh amendment which expanded the lease to include approximately 703 square feet of lab space, 576 square feet of cubicle space, 1096 square feet of Highbay lab space, and 376 square feet of High bay storage space in a building commonly known as Building 11. Effective September 1, 2021, the quarterly operating expense will be \$31,647 covering all utility and facility tooling costs. On January 24, 2022, the Company entered into the eighth amendment which expands the lease to include approximately 703 square feet of lab space, 768 square feet of cubicle space, 2,088 square feet of Highbay lab space, and 376 square feet of High bay storage space in a building commonly known as Building 11. Effective January 24, 2022, the quarterly operating expense will be \$44,252 covering all utility and facility tooling costs. The sublease expires June 30, 2025. On January 20, 2023, the Company entered into the ninth amendment to its lease with Oregon State University which reduces the amount of cubicle space from 768 square feet to 288 square feet. Effective January 20, 2023 the quarterly operating expense will be \$41,323 covering all utility and facility tooling costs.

On March 4, 2021, the Company entered into a lease agreement with Hudson 11601 Wilshire, LLC, to lease 3,500 square feet of office space located in Los Angeles, California. The lease term is 39 months and expires on June 30, 2024. The monthly lease expense is as follows:

- Months 1-12 - \$18,375
- Months 13-24 - \$19,018
- Months 25-36 - \$19,683
- Months 37-39 - \$20,372

The Company paid a security deposit totaling \$20,373 at lease inception date.

On May 4, 2021, we entered into a lease agreement with HP Inc. to lease office and lab space located in Corvallis, Oregon. The lease term is 5 years and the lease commencement date is April 1, 2021. The monthly lease expense is \$7,388 and increases by 3% on each anniversary of the lease commencement date. We will pay a security deposit totaling \$8,315. We have the option to extend the lease for an additional 5 years. On January 26, 2022, the Company entered into the first amendment to its lease with HP Inc., which amends the lease commencement date to January 26, 2022 and the lease expiration date to January 31, 2027.

On October 5, 2021, the Company entered into a lease agreement with Pacific N.W. Properties, LLC to lease 26,963 square feet of warehouse, manufacturing, production and office space located in Salem Oregon. The commencement date of the lease is October 1, 2021, the lease term is 62 months and expires on November 30, 2026.

On December 9, 2021, the Company entered into the first amendment to its lease agreement with Pacific N.W. Properties, LLC. The lease amendment revises the lease commencement date to December 9, 2021 and the lease expiration date to February 28, 2027. The revised monthly lease expense is as follows:

- Months 1-2 - \$15,357
- Months 3-12 - \$21,500
- Months 13-24 - \$22,145
- Months 25-36 - \$22,809
- Months 37-48 - \$23,494
- Months 49-60 - \$24,198
- Months 61-62 - \$24,924

We believe that our facilities are adequate to meet our needs for the immediate future and that, should it be needed, we will be able to secure additional space to accommodate the expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS.

From time to time, we are also involved in various other claims and legal actions that arise in the ordinary course of business. Although the results of litigation and claims cannot be predicted with certainty, we do not believe that the ultimate resolution of these actions will have a material adverse effect on our financial position, results of operations, liquidity or capital resources.

Future litigation may be necessary to defend ourselves and our partners by determining the scope, enforceability and validity of third party proprietary rights or to establish our proprietary rights. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information

Our common stock began trading on the Nasdaq Capital Market on January 26, 2021 under the symbol "CRKN." On June 9, 2020, our common stock began trading on the Over the Counter QB ("OTCQB") under the symbol "CRKN". Prior to that time, there was no public market for our common stock.

Our preferred stock is not listed nor traded on any stock exchange.

Holders of Record

We are authorized to issue up to 800,000,000 shares of common stock, par value \$0.0001 per share, and 50,000,000 shares of preferred stock. As of December 31, 2022, there were 20,243,509 shares of common stock issued and outstanding and 2,937 shareholders of record. The number of record holders does not include persons who held shares of our common stock in "street name" accounts through brokers, banks and other financial institutions. As of December 31, 2022, there were 251 shares of our Series A Preferred Stock issued and outstanding, 1,443 shares of our Series B Preferred Stock issued and outstanding and 500,756 shares of our Series C Preferred Stock issued and outstanding, with one shareholder of record of Series A, Series B and Series C of our preferred stock. During the year ended December 31, 2022, the Company issued 1,058 shares of Series D preferred stock. As of December 31, 2022, 1,058 shares of Series D preferred stock are issued and outstanding with seven shareholders of record.

Dividend Policy

We have not declared or paid any cash dividends on our common stock during the year ended December 31, 2022 and the nine months ended December 31, 2021, and do not currently anticipate paying cash dividends in the foreseeable future.

Recent Sales of Unregistered Securities

Other than those previously disclosed by the Company in its current reports on Form 8-K as filed with the SEC, there have been no unregistered sales of the Company's equity securities during the period covered by this Annual Report.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes thereto included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this report.

As an "emerging growth company" under the Jumpstart Our Business Startups Act of 2012, we can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are electing to delay our adoption of such new or revised accounting standards. As a result of this election, our consolidated financial statements may not be comparable to the financial statements of other public companies.

Management's plans and basis of presentation:

The Company was incorporated in the State of Delaware on April 20, 2015. Effective January 14, 2016, the Company's name was changed to 3D Nanocolor Corp. ("3D Nanocolor") from 2D Nanocolor Corp. Subsequently, effective October 6, 2017, the Company's name was changed to Crown Electrokinetics Corp. from 3D Nanocolor Corp.

The Company is commercializing technology for smart or dynamic glass with its first product being the Smart Window Insert by DynamicTint. The Company's electrokinetic glass technology is an advancement on microfluidic technology that was originally developed by Hewlett-Packard Company.

Business Combination

On December 20, 2022, the Company incorporated Crown Fiber Optics Corp., a Delaware based entity, to own and operate its acquired business from the acquisition of Amerigen 7 in the January 2023. Crown Fiber Optics Corp. will be accounted for as a wholly- owned subsidiary of Crown Electrokinetics, Corp.

On January 3, 2023, the Company acquired certain assets related to the construction of 5G fiber optics infrastructure and distributed antenna systems from Amerigen 7 LLC (the "Asset Acquisition"), for cash consideration of approximately \$0.65 million. The Asset Acquisition included approximately 12 employees, customer contracts, and certain operating liabilities. The Asset Acquisition will be accounted for as a business combination in accordance with Accounting Standards Codification 805, Business Combinations. The initial purchase price may be adjusted as needed per the terms of the arrangement agreement. The allocation of purchase price, including any fair value of the assets acquired and liabilities assumed as of the acquisition date has not been completed.

Common stock

On January 26, 2021, the Company completed its public offering and its common stock began trading on the Nasdaq Capital Market (Nasdaq) under the symbol CRKN.

On January 22, 2021, the Company's Board of Directors authorized a reverse stock split at an exchange ratio of one (1) share of common stock for every three (3) shares of common stock. The reverse stock split was effective on January 25, 2021, such that every three (3) shares of common stock have been automatically converted into one (1) share of common stock. The Company will not issue fractional certificates for post-reverse split shares in connection with the reverse stock split. Rather, all shares of common stock that are held by a stockholder will be aggregated and each stockholder shall be entitled to receive the number of whole shares resulting from the combination of the shares so aggregated. Any fractions resulting from the reverse stock split computation shall be rounded up to the next whole share.

On December 22, 2022, the Company's Board of Directors approved increasing the Company's authorized shares of common stock from 200,000,000 to 800,000,000 shares.

Public Offerings

On January 26, 2021, the Company entered into an underwriting agreement relating to the Company's public offering of its common stock, par value \$0.0001 per share. The Company agreed to sell 4,150,000 shares of its common stock to the underwriters, at a purchase price per share of \$4.14 (the offering price to the public of \$4.50 per share minus the underwriters' discount), pursuant to the Company's registration statement on Form S-1 (File No. 333-249833), as amended, under the Securities Act of 1933, as amended, and the related registration statement on Form S-1 (File No. 333-252418) that was filed by the Company under Rule 462(b) under the Securities Act. The Company has also granted the underwriters a 30-day option to purchase up to 622,500 additional shares of common stock to cover over-allotments. On January 28, 2021, the Company received net proceeds from its public offering of approximately \$19.3 million, net of underwriter fees and commissions of approximately \$1.7 million, and offering costs of \$0.4 million.

Additionally, there were 251 shares of our Series A Preferred Stock issued and outstanding, 1,443 shares of our Series B Preferred Stock issued and 500,756 shares of our Series C Preferred Stock issued, with one shareholder of record of each such series of our preferred stock.

On July 19, 2022, the Company entered into an underwriting agreement relating to the Company's public offering of its common stock, par value \$0.0001 per share. The Company agreed to sell 1,250,000 shares of its common stock to the underwriters, at a purchase price per share of \$0.744 (the offering price to the public of \$0.80 per share minus the underwriters' discount), pursuant to the Company's registration statement on Form S-3 (File No. 333-262122), under the Securities Act of 1933, as amended. The Company has also granted the underwriters a 30-day option to purchase up to 187,500 additional shares of common stock to cover over-allotments. On July 22, 2022, the Company received net proceeds of \$855,000, net of underwriter fees and commissions of approximately \$70,000, and offering costs of \$75,000.

In connection with the Company's public offering, the Company issued a warrant to the underwriters to purchase 62,500 shares of its common stock. The warrant may be exercised beginning on the date that is 180 days after July 22, 2022 until July 19, 2027. The exercise price of the warrant is \$0.80 per share.

ATM Offering

The Company entered into a Sales Agreement with A.G.P./Alliance Global Partners (the "Sales Agents") dated March 30, 2022 (the "Sales Agreement"), pursuant to which the Company may, from time to time, sell up to \$5 million in shares (the "Placement Shares") of the Company's common stock through the Sales Agents, acting as the Company's sales agent and/or principal, in a continuous at-the-market offering (the "ATM Offering"). The Company will pay the Sales Agents a commission of up to 3.0% of the aggregate gross proceeds the Company receives from all sales of the Company's common stock under the Sales Agreement. The Placement Shares will be offered and sold pursuant to the Company's shelf registration statement on Form S-3 (Registration No. 333- 262122) and the related base prospectus included in the registration statement, as supplemented by the prospectus supplement dated March 30, 2022.

On October 5, 2022, the Company and the Sales Agents filed the first amendment to the Sales Agreement (the "First Amendment to the Sales Agreement"). Pursuant to the First Amendment to the Sales Agreement, the Company may from time to time, sell up to \$3.5 million in Placement Shares of the Company's common stock through the Sales Agents in a continuous At-the-Market Offering (the Amended ATM Offering"). According to the First Amendment to the Sales Agreement, the Company will pay the Sales Agents a commission of up to 3.0% of the aggregate gross proceeds the Company receives from all sales of its common stock in the Amended ATM Offering.

As of December 31, 2022, the Company has received net proceeds on sales of 3,368,146 shares of common stock under the Sales Agreement of approximately \$1.25 million (after deducting \$0.05 million in commissions and expenses) at a weighted average price of \$0.385 per share.

Subsequent to December 31, 2022, the Company received net proceeds on sales of 12,700,000 shares of common stock of approximately \$2.11 million (after deducting \$0.09 million in commissions and expenses) at a weighted average price of \$0.173 per share.

Preferred Stock

On July 8, 2022, the Company's Board of Directors authorized 7,000 shares of Series D preferred stock with a par value of \$0.0001 per share. Each preferred share of Series D preferred stock will have a stated value of \$1,000 per share, will be convertible into shares of the Company's common stock at an initial conversion price of \$1.30 per share and will be entitled to a dividend of 12%. The Company may redeem all, but not less than all, of the Series D preferred stock for cash, at a price per share of Series D Preferred Stock equal to 125% of the stated value. The Series D preferred stock has no voting rights. As of June 30, 2022, the Company recorded \$1.1 million of shares liability in its consolidated balance sheet related to cash received for 1,058 shares of Series D preferred stock that were issued in July 2022. In connection with the issuance of the 1,058 shares of Series D preferred stock, the Company issued 814,102 warrants to purchase shares of the Company's common stock with an exercise price of \$1.30 per share.

Subsequent to December 31, 2022, the Company filed the first amendment to its Series D preferred stock, which modifies the conversion price of the Series D preferred stock from \$1.30 to \$0.50 per share.

On February 1, 2023, the Company's Board of Directors authorized 77,000 shares of Series E preferred stock with a par value of \$0.0001 per share, in connection with its 2023 Line of Credit. Each share of Series E Preferred Stock is convertible into 1,000 shares of the Company's common stock at the option of the holders. The holders of the Series E preferred stock shall receive dividends on an as converted basis together with the holders of the Company's common stock. The Series E preferred stock has no voting rights and does not have a preference upon any liquidation, dissolution or winding-up of the Company.

Holders of Series E preferred stock are prohibited from converting shares of Series E preferred stock into shares of common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (to be initially set at 4.99% and thereafter adjusted by the holder to a number between 4.99% and 9.99%) of the total number of shares of common stock issued and outstanding immediately after giving effect to such conversion. In addition, in the event a conversion of Series E preferred stock would result in the holder owning more than 19.99% of the Company's outstanding shares of common stock, the number of shares of common stock that may be issued upon such conversion of Series E preferred stock, shall be limited to 19.99% of the Company's outstanding shares of common stock on that date, unless stockholder approval is obtained by the Company to issue a number of shares of common stock exceeding the limit.

Senior Secured Convertible Notes

On October 19, 2022, the Company issued senior secured convertible notes (the "Notes") with a principal balance of approximately \$5.4 million, and warrants to purchase 21,749,402 shares of the Company's common stock for net proceeds of \$3.5 million. The Notes were issued with a conversion price at a 54% premium to the most recent closing price, an original issue discount of 35%, do not bear interest, and mature upon the earlier of twelve months from the date of issuance or the closing of a change of control transaction (as defined in the Notes). The Notes are convertible into shares of the Company's common stock at a conversion price of \$0.49 per share, subject to adjustment under certain circumstances described in the Notes. The Notes are secured by all of the Company's assets (subject to exceptions for certain strategic transactions).

The warrants have an exercise price of \$0.32 per share and expire five years from the issuance date (subject to adjustment under certain circumstances described in the warrants).

As of December 31, 2022, the fair value of the Notes was approximately \$1.7 million. During the year ended December 31, 2022, the Company recorded a change in fair value of the Notes totaling \$0.15 million.

On January 19, 2023, the Company entered into a warrant inducement agreement with certain holders of the Notes, and issued 6.4 million warrants, with a fair value of \$2.06 million, to purchase shares of the Company's common stock.

On February 28, 2023, the Company entered into waiver agreements with the investors of the Notes issued in October 2022, which extended the maturity date of the Notes from October 18, 2023 until April 18, 2023. In connection with the waiver agreements, the Company issued 5,813,414 warrants to purchase shares of the Company's common stock, which are exercisable at \$0.32 per share and expire five years from the issuance date.

On January 3, 2023, the Company issued senior secured notes (the "2023 Notes") with a principal balance of approximately \$1.2 million, and warrants to purchase 2,500,000 shares of the Company's common stock for net proceeds of \$0.8 million. The 2023 Notes were issued with an original issue discount of 20%, do not bear interest, and mature three months from the date of issuance (unless extended pursuant to the terms of the 2023 Notes). The warrants are exercisable for five years at an exercise price of \$0.322, subject to adjustment under certain circumstances described in the warrants.

2023 Line of Credit

On February 2, 2023, the Company entered into a line of credit (the "Line of Credit") securing a line of credit up to \$100.0 million. The Line of Credit will be used to fund expenses related to the fulfillment of contracts with customers of the Company's wholly-owned subsidiary, Crown Fiber Optics Corporation. The Line of Credit expires February 2, 2024, unless the Line of Credit is extended for one or two additional years in accordance with its terms. On February 2, 2023, the Company withdrew \$2.0 million under the Line of Credit.

Upon drawing down on the Line of Credit, the Company will issue a Secured Promissory Note ("the Promissory Note") which is due and payable 60 days from the issuance date. The Promissory Note is non-interest bearing and secured by the Company's assets. The Promissory Note issued with the initial \$2.0 million draw down is convertible into shares of the Company's common stock, at a conversion price per share of \$0.50 per share, subject to adjustment under certain circumstances described in the Promissory Note. Promissory Notes evidencing future withdrawals, if any, will be convertible into common stock only upon the declaration of an event of default under such Promissory Note.

Common Stock

Subsequent to December 31, 2022, the Company issued 6,405,844 shares of its common stock in connection with the exercise of 6,405,844 warrants, receiving net proceeds of approximately \$2.06 million at a weighted average price of \$0.32 per share.

As consideration for entering into the Line of Credit, the Company issued 5,000 shares of Series E preferred stock, and issued a warrant to purchase 45,000 shares of the Company's Series E preferred stock. Additionally, 5,000 shares of Series E preferred stock will be issued on the first and second anniversary of the effective date of the Line of Credit. However, if the Company does not elect to extend the Line of Credit for an additional one or two years, the additional 5,000 shares of Series E preferred stock will be issued immediately.

The warrant to purchase 45,000 shares of the Company's Series E preferred stock is exercisable for five years at an exercise price of the greater of \$0.50 per share multiplied by 1,000, and subject to adjustment under certain circumstances described in the warrant.

Leases

Crown's Research & Development Operation currently occupies 1,700 square feet of space, located on the HP Inc. campus in Corvallis, Oregon in the Advanced Technology and Manufacturing Institute (ATAMI). ATAMI is an academic-industrial research center and business incubator designed to provide an advanced materials development environment to private sector partner tenants performing research and development. The facility includes access to shared state-of-the-art tooling capabilities. ATAMI has grown to 80,000 square feet since its inception in 2004.

On March 4, 2021, the Company entered into a standard office lease with Hudson 11601 Wilshire, LLC, to lease 3,500 square feet of office space located at 11601 Wilshire Boulevard, Los Angeles, California 90025. The base monthly rent for the first year of the lease is \$18,375 per month, which increases to \$19,018.13 per month for the second year, \$19,683.76 for the third year and \$20,372.69 for the final three months of the lease. The lease expires on June 30, 2024.

On October 5, 2021, the Company entered into a lease agreement with Pacific N.W. Properties, LLC to lease 26,963 square feet of warehouse, manufacturing, production and office space located in Salem Oregon. The commencement date of the lease is October 1, 2021, the lease term is 62 months and expires on November 30, 2026.

We believe that our facilities are adequate to meet our needs for the immediate future and that, should it be needed, we will be able to secure additional space to accommodate the expansion of our operations. This office space, along with ATAMI, offers Crown all the space requirements it needs for the foreseeable future.

Master Supply Agreements

On March 25, 2022, Crown executed a Master Supply Agreement (the "BDN MSA") with Brandywine Operating Partnerships L.P. to install its Smart Window Inserts powered by DynamicTint™ in Brandywine office buildings. The BDN MSA provides the master terms and conditions under which purchase orders will be executed for Crown to supply units to retrofit windows at certain locations.

On December 27, 2021, Crown executed a Master Supply Agreement (the "HPP MSA") with Hudson Pacific Properties L.P. for the installation of Crown's energy saving Smart Window Inserts in several office properties across its West Coast portfolio. The HPP MSA provides the master terms and conditions under which purchase orders will be executed for Crown to supply units to retrofit windows at certain locations.

Prior to this, on September 27, 2021, Crown had entered into a Master Supply Agreement with MetroSpaces Inc., Crown's first commercial customer, install its Smart Window Inserts in MetroSpaces' 70,000 square-foot Houston, Texas office building.

Additionally, discussions with multiple other building owners to buy Crown Smart Window Inserts are progressing as the regulatory and consumer pressure to reduce the level of energy consumption and carbon emissions, continues to build.

Purchase Orders

On August 12, 2022, the Company entered into two Purchase Orders (PO's) with Hudson Pacific Properties, L.P. ("Hudson") for the purchase of the Company's Smart Window Inserts™ ("Inserts"). Hudson is a unique provider of end-to-end real estate solutions for tech and media tenants. The PO's have a value of \$85,450 and represent the first orders the Company has received prior to the launch of its Inserts. Delivery and installation are expected to begin in December 2022.

On August 12, 2022, as additional consideration for the PO's, the Company issued a warrant to Hudson to purchase 300,000 shares of the Company's common stock at \$0.75 per share. The warrant has a five year life and expires on August 12, 2027.

Consolidated Results of Operations for the year ended December 31, 2022 as compared to the year ended December 31, 2021 (in thousands):

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021	Three Months Ended March 31, 2021 (Unaudited)	Year Ended December 31, 2021
Research and development	\$ 4,107	\$ 2,496	\$ 906	\$ 3,402
Selling, general and administrative	11,001	14,367	4,357	18,724
Other (income) expense:				
Other expense	74	55	(6)	49
Interest expense	7	7	531	538
Gain on forgiveness of PPP loan	-	(431)	-	(431)
(Gain) loss on extinguishment of debt	-	(7)	13,805	13,798
Loss on conversion of notes	-	-	6	6
Change in fair value of warrant liability	(1,023)	-	1,023	1,023
Change in fair value of derivative liability	-	-	51	51
Change in fair value of notes	149	-	-	-
Net loss	\$ 14,315	\$ 16,487	\$ 20,673	\$ 37,160

On November 10, 2021, the Board of Directors of the Company approved a change in its fiscal year end from March 31st to December 31st. As a result, the Company's results of operations, cash flows, and all transactions impacting shareholders equity presented in this Annual Report on Form 10-K are for the calendar year ended December 31, 2022 and the nine months ended December 31, 2021.

We believe reviewing our operating results for the year ended December 31, 2021 by combining the results of operations for the three months ended March 31, 2021 is more useful in discussing our overall operating performance compared to the results of consolidated operations for the year ended December 31, 2022.

Research and Development

Research and development expenses were \$4.1 million for the year ended December 31, 2022 compared to \$3.4 million for the year ended December 31, 2021. The increase of \$0.7 million is primarily related to additional salaries and benefits of \$1.3 million, offset by a decrease in stock compensation of \$0.6 million.

Selling, General and Administrative

Selling, general and administrative ("SG&A") expenses were \$11.0 million and \$18.7 million for the year ended December 31, 2022 and 2021, respectively. The \$7.7 million decrease in SG&A expenses is primarily due to decreases in stock-based compensation of \$9.2 million, and payroll and related expenses of \$0.7 million, offset by increases in bonus expense of \$0.9 million, rent expense of \$0.5 million, depreciation and amortization of \$0.2 million, and other SG&A expenses of \$0.5 million.

Other (Income) Expense

Other income for the year ended December 31, 2022 was \$0.8 million and consisted of \$1.0 million for the change in fair value of our warrant liability, offset by \$0.1 million for the change in fair value of our convertible notes and \$0.1 million of other expense. Other expense for the year ended December 31, 2021 totaled \$15.0 million, which primarily consisted of a loss on extinguishment of debt of \$13.8 million, interest expense of \$0.5 million recorded in connection with our convertible notes, the change in fair value of our warrant liability of \$1.0 million, and the change in fair value of our derivative liability of \$0.1 million, offset by a \$0.4 million gain recorded in connection with the forgiveness of our PPP loan.

Liquidity

	Year Ended December 31, 2022	Nine Months Ended December 31, 2022
Cash and cash equivalents at the beginning of the period	\$ 6,130	\$ 15,297
Net cash used in operating activities	(11,140)	(8,537)
Net cash used in investing activities	(812)	(816)
Net cash provided by financing activities	6,643	186
Cash and cash equivalents at the end of the period	\$ 821	\$ 6,130

The Company had an accumulated deficit of approximately \$88.0 million, and a net loss of \$14.3 million, and used approximately \$11.1 million in net cash in operating activities for the year ended December 31, 2022. The Company expects to continue to incur ongoing administrative and other expenses, including public company expenses.

On March 23, 2022, the Company entered into an Irrevocable \$10 million Standby Letter of Credit (“SLOC”). The SLOC accrues interest at a rate of 12% per annum and matures 2 years from the issuance date of the SLOC. Interest is payable quarterly. In connection with the SLOC, the Company issued a warrant for 200,000 shares of common stock with an exercise price of \$2. Additionally, the Company will issue 50,000 shares of its restricted common stock with each cash draw of \$1.0 million. Drawdowns are capped at a maximum of \$5 million in the first six months. The Company did not drawdown any SLOC funds during the year ended December 31, 2022, and intends to drawdown on the available funds only as necessary in 2023.

The Company entered into a Sales Agreement with A.G.P./Alliance Global Partners (the “Sales Agents”) dated March 30, 2022 (the “Sales Agreement”), pursuant to which the Company may, from time to time, sell up to \$5 million in shares (the “Placement Shares”) of the Company’s common stock through the Sales Agents, acting as the Company’s sales agent and/or principal, in a continuous at-the-market offering (the “ATM Offering”). The Company will pay the Sales Agents a commission of up to 3.0% of the aggregate gross proceeds the Company receives from all sales of the Company’s common stock under the Sales Agreement. The Placement Shares will be offered and sold pursuant to the Company’s shelf registration statement on Form S-3 (Registration No. 333- 262122) and the related base prospectus included in the registration statement, as supplemented by the prospectus supplement dated March 30, 2022. As of December 31, 2022 the Company has received net proceeds on sales of 3,368,146 shares of common stock under the Sales Agreement of approximately \$1.25 million (after deducting \$0.05 million in commissions and expenses) at a weighted average price of \$0.385 per share.

The Company received net proceeds of \$3.5 million in connection with the issuance of our convertible notes and warrants on October 19, 2022.

On February 2, 2023, the Company entered into a line of credit (the “Line of Credit”) securing a line of credit up to \$100.0 million. The Line of Credit will be used to fund expenses related to the fulfillment of contracts with customers of the Company’s wholly-owned subsidiary, Crown Fiber Optics Corporation. The Line of Credit expires February 2, 2024, unless the Line of Credit is extended for one or two additional years in accordance with its terms. On February 2, 2023, the Company withdrew \$2.0 million under the Line of Credit.

The Company will seek to obtain additional capital through the sale of debt or equity financings or other arrangements including through its existing At-The-Market, \$10 million Standing Letter of Credit \$10, and \$100 million Line of Credit facilities to fund operations; however, there can be no assurance that the Company will be able to raise needed capital under acceptable terms, if at all. The sale of additional equity may dilute existing stockholders and newly issued shares may contain senior rights and preferences compared to currently outstanding shares of common stock. Issued debt securities may contain covenants and limit the Company’s ability to pay dividends or make other distributions to stockholders. If the Company is unable to obtain such additional financing, future operations would need to be scaled back or discontinued. Due to the uncertainty in the Company’s ability to raise capital, management believes that there is substantial doubt in the Company’s ability to continue as a going concern for twelve months from the issuance of these financial statements.

Cash Flows

Operating Activities

For the year ended December 31, 2022, net cash used in operating activities was \$11.1 million, which primarily consisted of our net loss of \$14.3 million, adjusted for non-cash expenses of \$2.7 million which primarily consisted of stock-based compensation expenses totaling \$2.4 million, amortization of right of use assets of \$0.5 million, and depreciation and amortization of \$0.5 million and other expenses of \$0.3 million, offset by the change in fair value of our warrant liability of \$1.0 million. The net change in operating assets and liabilities was \$0.9 million, consisting primarily of an increase of \$0.7 million in accounts payable and accrued expenses, and an increase of \$0.2 million in prepaid and other current assets.

For the nine months ended December 31, 2021, net cash used in operating activities was \$8.5 million, which primarily consisted of our net loss of \$16.5 million, adjusted for non-cash expenses of \$8.5 million which primarily consisted of stock-based compensation expenses totaling \$8.7 million, and depreciation and amortization of \$0.2 million, offset by gain on extinguishment of debt of \$0.4 million in connection with the forgiveness of our PPP loan. The net change in operating assets and liabilities was \$0.5 million, primarily consisting of an increase in prepaid and other assets.

Investing Activities

For the year ended December 31, 2022, net cash used in investing activities was approximately \$0.8 million primarily related to the purchase of equipment.

For the nine months ended December 31, 2021, net cash used in investing activities was approximately \$0.8 million, consisting of \$0.6 million related to the purchase of property and equipment and \$0.2 million for the purchase of the IBM patents.

Financing Activities

For the year ended December 31, 2022, net cash provided by financing activities was \$6.6 million and consisted of \$0.9 million of proceeds received for the issuance of common stock and warrants, \$3.5 million of net proceeds received from the issuance of our convertible notes and warrants, \$1.0 million received in connection with the issuance of our Series D preferred stock, and \$1.2 million received from the issuance of common stock in connection with our ATM Offering.

For the nine months ended December 31, 2021, net cash provided by financing activities was \$0.2 million, related to the exercise of stock options.

Off-balance sheet arrangements

We did not have any off-balance sheet arrangements during the periods presented, and we do not currently have any off-balance sheet arrangements, as defined in the SEC rules and regulations.

Critical accounting policies and significant judgments and estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of our financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates. Our most critical accounting policies are summarized below. See Note 3 to our consolidated financial statements for a description of our other significant accounting policies.

Fair Value Measurement

The Company follows the accounting guidance in Accounting Standards Codification (“ASC”) 820 for its fair value measurements of financial assets and liabilities measured at fair value on a recurring basis. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The accounting guidance requires fair value measurements be classified and disclosed in one of the following three categories:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs other than Level 1 prices, for similar assets or liabilities that are directly or indirectly observable in the marketplace.

Level 3: Unobservable inputs which are supported by little or no market activity and that are financial instruments whose values are determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

Convertible Notes

In accordance with Accounting Standards Codification 825, *Financial Instruments* (“ASC 825”), the Company has elected the fair value option for recognition of its Notes. In accordance with ASC 825, the Company recognizes these Notes at fair value with changes in fair value recognized in the statements of operations. The fair value option may be applied instrument by instrument, but it is irrevocable. As a result of applying the fair value option, direct costs and fees related to the convertible notes were recognized in general and administrative expense. The convertible notes issued during the year ended December 31, 2022 are non-interest bearing.

Warrant Liability

The Company accounted for certain common stock warrants outstanding as a liability at fair value and adjusted the instruments to fair value at each reporting period. This liability is subject to re-measurement at each balance sheet date until exercised, and any change in fair value is recognized in the Company’s statements of operations. The fair value of the warrants issued by the Company have been estimated using the Monte Carlo simulation.

Stock-based compensation

We measure and recognize compensation expense for all options based on the estimated fair value of the award on the grant date. We use the Black-Scholes option-pricing model to estimate the fair value of option awards. The fair value is recognized as expense on a straight-line basis over the requisite service period. We account for forfeitures as they occur. We recognize expense for awards where vesting is subject to a market or performance condition based on the derived service period. Expense for awards with performance conditions would be estimated and adjusted on a quarterly basis based upon our assessment of the probability that the performance condition will be met.

The determination of the grant date fair value of options using an option pricing model is affected principally by our estimated fair value of shares of our common stock and requires management to make a number of other assumptions, including the expected life of the option, the volatility of the underlying shares, the risk-free interest rate and expected dividends. The assumptions used in our Black-Scholes option-pricing model represent management's best estimates at the time of measurement. These estimates are complex, involve a number of variables, uncertainties and assumptions and the application of management's judgment, as they are inherently subjective. If any assumptions change, our stock-based compensation expense could be materially different in the future.

These assumptions are estimated as follows:

- **Expected Term.** The expected term of options represents the period that our stock-based awards are expected to be outstanding based on the simplified method, which is the half-life from vesting to the end of its contractual term. The simplified method was used because we do not have sufficient historical exercise data to provide a reasonable basis for an estimate of expected term.
- **Expected Volatility.** The Company uses a blended volatility that includes its common stock trading history and supplements the remaining historical information with the trading history from the common stock of a set of comparable publicly traded companies.
- **Risk-Free Interest Rate.** We base the risk-free interest rate on the implied yield available on U. S. Treasury zero-coupon issues with an equivalent remaining term.
- **Expected Dividend Yield.** We have never declared or paid any cash dividends on our common shares and do not plan to pay cash dividends in the foreseeable future, and, therefore, we use an expected dividend yield of zero in our valuation models.

We account for forfeited awards as they occur.

Fair Value of Common Stock

Historically, the fair values of the shares of common stock underlying our options were estimated on each grant date by our board of directors. In order to determine the fair value, our board of directors considered, among other things, contemporaneous valuations of our common stock and preferred stock prepared by unrelated third-party valuation firms in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, Valuation of Privately-Held- Company Equity Securities Issued as Compensation, or the Practice Aid. Given the absence of a public trading market of our capital stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including:

- contemporaneous third-party valuations of our common stock;
- the prices, rights, preferences and privileges of our preferred stock relative to our common stock;
- our business, financial condition and results of operations, including related industry trends affecting our operations;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company, given prevailing market conditions;
- the lack of marketability of our common stock;
- the market performance of comparable publicly traded companies; and
- U.S. and global economic and capital market conditions and outlook.

Recent accounting pronouncements

See Note 3 to our consolidated financial statements for a description of recent accounting pronouncements applicable to our financial statements.

JOBS Act Transition Period

As an “emerging growth company” under the Jumpstart Our Business Startups Act of 2012, we can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are electing to delay our adoption of such new or revised accounting standards. As a result of this election, our consolidated financial statements may not be comparable to the financial statements of other public companies.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

As a smaller reporting company, we are not required to provide the information required by this item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The consolidated financial statements and supplementary data required by this item are included after Part IV of this Annual Report on Form 10-K beginning on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

We have not had any disagreements with our accountants or auditors that would need to be disclosed pursuant to Item 304 of Regulation S-K promulgated under the Securities Act of 1933.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, to allow timely decisions regarding required disclosure.

The design of any disclosure controls and procedures also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

With respect to the year ended December 31, 2022, under the supervision and with the participation of our management, we conducted an evaluation of the effectiveness of the design and operations of our disclosure controls and procedures. Based upon this evaluation, our Chief Executive Officer has concluded that our disclosure controls and procedures are effective.

Management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control systems are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in a cost-effective control system, no evaluation of internal control over financial reporting can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been or will be detected.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with GAAP. A company's internal control over financial reporting includes policies and procedures that: (1) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, under the supervision and with the participation of our principal executive officer, performed an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2022. Based on management's assessment, we have concluded that our internal control over financial reporting was effective as of December 31, 2022.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended December 31, 2022 which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Management

Set forth below is information regarding our directors and executive officers as of the date of this Annual Report to the Form 10-K.

Name	Age	Title
Executive Officers		
Douglas Croxall	54	Chairman & Chief Executive Officer
Tim Koch	62	Chief Technology Officer
Joel Krutz	49	Chief Operating Officer and Chief Financial Officer
Non-Employee Directors		
Dr. DJ Nag	55	Director
Daniel Marcus	56	Director

All directors serve for one year and until their successors are elected and qualified. All officers serve at the pleasure of the Board of Directors. There are no family relationships among any of our officers and directors.

Information concerning our executive officers and directors is set forth below.

Executive Officers

Douglas Croxall. Mr. Croxall is the Chief Executive Officer and Chairman of the Board of Directors of Crown Electrokinetics Corp. Prior to co-founding Crown Electrokinetics, Mr. Croxall was the CEO and Chairman of the Board of Directors of Marathon Patent Group from November 2012 until December 2017. Mr. Croxall holds a BA degree from Purdue University and an MBA from Pepperdine University.

We believe that Mr. Croxall should continue to serve as a member of our board of directors due to his executive experience, and his financial, investment, and management experience, which will provide the requisite qualifications, skills, perspectives, and experience that make him well qualified.

Timothy Koch. Mr. Koch is the Chief Technology Officer of Crown Electrokinetics. Prior to co-founding Crown, he was in charge of the R&D team at HP that invented electrokinetic (EK) technology. He has over 30 years of engineering and management experience in both technology development and product manufacturing. He holds a BS from Cornell University and a MS from Stanford University, both degrees in Material Science & Engineering. He has also completed an Executive Development Program from the Cornell University Johnson Graduate School of Management.

Joel Krutz. Mr. Krutz is the Chief Operating Officer and Chief Financial Officer of Crown Electrokinetics. Prior to his appointment as the Company's COO and CFO, Mr. Krutz was CFO of ViacomCBS Networks International, a \$2.0 billion division of the global multi-media enterprise. While at ViacomCBS, Mr. Krutz led a team which fully overhauled the financial operating model and guided the business through a period of record growth, diversification, and expansion. Mr. Krutz has been developing and leading strategic financial organizations, around the world, for over two decades. Mr. Krutz graduated from Waikato University, New Zealand with a degree in Management Studies, majoring in Accounting. He received his professional qualifications from the Chartered Institute of Management accountants in London, and a Certificate of Business Administration and Management from the Harvard Business School Executive Education program.

Non-Employee Directors

Dr. DJ Nag has served as a member of our board of directors since July 2020. Dr. DJ Nag is the President of Innovaito LLC, an intellectual property strategy think tank. Prior to this, Dr. Nag was the Chief Investment Officer at Ventech Solutions, a healthcare technology company that manages quality data for the Center for Medicare and Medicaid Services (CMS). He has successfully led Ohio State University, Rutgers University and University of Nebraska's technology transfer operations that included licensing, startup and investments. As an entrepreneur, he led a number of start-ups in the intellectual property strategy, artificial intelligence, and medical device space. As a consultant in patent monetization and intellectual property strategy, he has worked with many Fortune 500 companies, universities, and national governments. He was a Director of Ocean Tomo and a Vice President at ICAP Ocean Tomo, leading patent transaction markets. He was recognized as one of the top IP strategists by IAM300 in 2019. Dr. Nag was on the Board of the Association of University Technology Managers, Inc. (AUTM) from 2012 to 14, focused on educating the members around world on the importance of technology transfer and intellectual property. He is widely recognized as a global intellectual property strategist working with government and universities in Poland, Japan, India, Turkey, Brazil, South Korea, Ukraine and many other countries. Currently, he teaches intellectual property strategy and negotiations as a Professor of Practice at Rutgers University and a Visiting Professor at Shizuoka University. He volunteers as the first Executive-in-Residence at the Dublin City Schools, leading a startup academy for high school students and serves on the foundation board at the Dublin Methodist Hospital.

We believe that Dr. Nag should continue to serve as a member of our board of directors due to his executive, technological and intellectual property experience.

Daniel Marcus

Daniel Marcus has served as a member of the Company's Board of Directors since October 2022. Mr. Marcus is the Principal and Founder of Marcus Capital. Prior to forming Marcus Capital in 2004, Mr. Marcus worked at Bear Stearns as a managing director and has over 25 years of investment experience. He earned his Bachelors of Business Degree in Economics from the University of Wisconsin-Madison. In addition to forming Marcus Capital, Mr. Marcus is a founding partner of Spark Ventures, a non-profit charitable organization. Mr. Marcus has been involved with various charities including 10 years as a Child Life Specialist at Children's Memorial Hospital, Chicago and two years at The Night Ministry, working to serve homeless and runaway youth. The Company's Board of Directors believes that Mr. Marcus should continue to serve as a member of the Board of Directors due to his executive, financial and investment experience.

Code of Ethics

We have adopted a Code of Ethics and Business Conduct which is applicable to the conduct of our directors, officers and employees, including our CEO, CFO and persons performing similar functions. A copy of our Code of Business Conduct and Ethics has been filed with the Securities and Exchange Commission as an exhibit to the Company's Registration Statement on Form S-1 filed June 28, 2019.

Family Relationships

There are no family relationships between any of our executive officers and directors.

Board of Directors

Each of our directors will be elected at our annual meeting of stockholders and hold office until the next annual meeting of stockholders, or until a successor is elected and qualified. If any director resigns, dies or is otherwise unable to serve out the director's term, or if the board of directors increases the number of directors, the board of directors may fill the vacancy by the vote of a majority of the directors then in office. A director elected to fill a vacancy shall serve for the unexpired term of such director's predecessor.

Director Independence

The Exchange Listing Rules require that independent directors compose a majority of a listed company's board of directors within one year of listing. In addition, the Exchange Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation, and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act of 1934. Under the Exchange Listing Rules, a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries.

In addition, members of the compensation committee must satisfy additional independence requirements set forth in the Exchange Listing Rules. In order to be considered independent for purposes of the Exchange Listing Rules, a member of a compensation committee of a listed company may not, other than in his or her capacity as a member of the compensation committee, the board of directors, or any other board committee, accept, directly or indirectly any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries. Additionally, the board of directors of the listed company must consider whether the compensation committee member is an affiliated person of the listed company or any of its subsidiaries and if so, must determine whether such affiliation would impair the director's judgment as a member of the compensation committee.

Our board of directors undertook a review of its composition, the composition of its committees and the independence of each director. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our board of directors determined that Messrs. Nag, and Marcus do not have any relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each is considered an “independent” director as that term is defined under the applicable SEC rules and the Exchange Listing Rules. In making those determinations, our board of directors considered the current and prior relationships that each non-employee director has with our Company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director.

Committees of the Board of Directors

We have an Audit Committee, Compensation Committee, and Governance and Nominating Committee. Our Audit Committee consists of two independent directors who are Dr. Nag and Mr. Marcus, with Mr. Marcus considered as an “audit committee financial expert” within the meaning of Regulation S-K of the SEC. Our Compensation Committee and Governance and Nominating Committee consists of two independent directors who are Dr. Nag and Mr. Marcus.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires our executive officers, directors and persons who beneficially own more than 10% of our common stock to file with the SEC reports of their ownership and changes in their ownership of our common stock. To our knowledge, based solely on review of the copies of such reports and amendments to such reports with respect to the year ended December 31, 2022 filed with the SEC, all required Section 16 reports under the Exchange Act for our directors, executive officers and beneficial owners of greater than 10% of our common stock were filed on a timely basis during the year ended December 31, 2022, except for late Form 4 filings reporting (i) four transactions by Doug Croxall and (ii) two transactions by Joel Krutz. As of the date of the filing of this annual report, all such Form 4s have been filed.

ITEM 11. EXECUTIVE COMPENSATION.

Summary Compensation Table

The following table sets forth information regarding compensation earned during the years ended December 31, 2021 and the nine months ended December 31, 2021 by our principal executive officer and our other most highly compensated executive officers, or the named executive officers, as of the end of the year ended December 31, 2022.

Name and Principal Position	Compensation Table					
	Annual Compensation			Other Compensation	Long-Term Compensation Awards	
	Fiscal Year Ended	Salary	Bonus		Options	Restricted Stock Awards
Douglas Croxall Chief Executive Officer	2022	\$ 675,000	\$ 525,000		\$ 37,974	\$ 51,000
	2021(b)	\$ 506,250	\$ 400,000	\$ -	\$ 30,799	\$ -
Edward Kovalik Co-President/Chief Operating Officer	2022(a)	\$ 184,229				
	2021	\$ 412,500	\$ -	\$ -	\$ -	\$ 2,196,000
Kai Sato Co-President/Chief Marketing Officer	2022(a)			\$ 137,499		
	2021(b)	\$ -	\$ -	\$ 504,164	\$ -	\$ 1,896,000
Joel Krutz Chief Financial Officer	2022	\$ 376,666	\$ 250,000		\$ 25,316	\$ 34,000
	2021(b)	\$ 195,000	\$ -	\$ 128,389	\$ -	\$ 1,600,000
Timothy Koch Chief Tech. Officer	2022	\$ 250,000			\$ 15,822	\$ 21,250
	2021(b)	\$ 175,833	\$ -	\$ -	\$ -	\$ -

(a) *Departed during the year ended December 31, 2022*

(b) *Nine months ended December 31, 2021*

Restricted Stock

A total of 437,500 restricted stock units have been issued to employees, and 100,000 restricted stock units have been issued to advisors, and 138,850 restricted stock units have been granted to members of our board of directors

During the nine months ended December 31, 2021, the Company granted 800,000 restricted stock units with a fair value of approximately \$4.1 million, in exchange for 800,000 restricted stock awards issued to an officer of the Company and a consultant. The fair value and vesting terms of the restricted stock units are identical to the terms of the restricted stock awards, and therefore, no incremental stock-based compensation has been recognized during the nine months ended December 31, 2021.

Stock Option Grants

A total of 832,500 stock options have been granted to employees, 0 stock options have been granted to advisors, and 0 stock options have been granted to members of our board of directors.

Board of Directors Compensation

Directors who are employees of our company or of any of our subsidiaries receive no additional compensation for serving on our Board of Directors or any of its committees. All directors who are not employees of our company or of any of our subsidiaries are compensated at the rate of \$12,000 per quarter. The Lead Independent Director receives a quarterly premium of \$1,500 and Committee Chairs \$1,000. All directors who are not employees are eligible for annual equity compensation of \$75,000 payable in shares of common stock.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The following table sets forth information as of March 30, 2023, regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of any class of our voting securities;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

The table lists applicable percentage ownership based on 43,686,623 shares of common stock outstanding as of March 30, 2023. Options to purchase shares of our common stock that are exercisable within 60 days of March 30, 2023, are deemed to be beneficially owned by the persons holding these options for the purpose of computing percentage ownership of that person, but are not treated as outstanding for the purpose of computing any other person's ownership percentage.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Except as noted by footnote, and subject to community property laws where applicable, we believe, based on the information provided to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Crown Electrokinetics Corp. and either 11601 Wilshire Blvd Suite 2240 Los Angeles, CA or 1110 NE Circle Blvd., Corvallis, Oregon 97330 as denoted by state

Name of Beneficial Owner	Number of Shares and Nature of Beneficial Ownership(1)	Percent of Common Stock Outstanding(2)	State
Douglas Croxall	4,199,882	8.91%	CA
Timothy Koch	1,638,795	3.65%	OR
DJ Nag	87,023	0.20%	CA
Joel Krutz	333,333	0.76%	CA
Daniel Marcus	7,000	0.02%	CA
Long Grove Partners LLC	1,932,583	4.42%	PA
All directors and executive officers as a group (five persons)	6,266,034	12.85%	

- (1) A person is considered to beneficially own any shares: (i) over which such person, directly or indirectly, exercises sole or shared voting or investment power, or (ii) of which such person has the right to acquire beneficial ownership at any time within 60 days (such as through exercise of stock options or warrants). Unless otherwise indicated, voting and investment power relating to the shares shown in the table for our directors and executive officers is exercised solely by the beneficial owner or shared by the owner and the owner's spouse or children.
- (2) Shares of our common stock issuable upon the conversion of our convertible preferred stock are deemed outstanding for purposes of computing the percentage shown above. In addition, for purposes of this table, a person or group of persons is deemed to have "beneficial ownership" of any shares of common stock that such person has the right to acquire within 60 days after the date of this prospectus. For purposes of computing the percentage of outstanding shares of our common stock held by each person or group of persons named above, any shares that such person or persons has the right to acquire within 60 days after the date of this prospectus is deemed to be outstanding, but is not deemed to be outstanding for the purpose of computing the percentage ownership of any other person. The inclusion herein of any shares listed as beneficially owned does not constitute an admission of beneficial ownership.

From time to time, the number of our shares held in the "street name" accounts of various securities dealers for the benefit of their clients or in centralized securities depositories may exceed 5% of the total shares of our common stock outstanding.

Equity Incentive Plan

On October 31, 2022, the Company adopted its 2022 Long-Term Incentive Plan (the "2022 Plan"). Under the 2022 Plan, the maximum number of shares of our common stock as to which awards may be granted under the 2022 Plan may not exceed four million two hundred thousand (4,200,000) shares (the "Initial Share Limit"), which amount is subject to proportional adjustment as determined by our Board to reflect certain stock changes, such as stock dividends and stock splits (see "Recapitalization Adjustments" below).

Notwithstanding the foregoing, (a) the total number of shares of common stock that may be delivered pursuant to awards under the 2022 Plan shall automatically increase on the first trading day of each calendar year, beginning with the 2023 calendar year, by such number of shares of common stock as are necessary so that the total number of shares reserved for issuance under the 2022 Plan shall be equal to 19.9% of the total number of outstanding shares of common stock, determined on a fully diluted basis as of the applicable trading date (the "Stipulated Percentage"); (b) our Board of Directors may act prior to January 1st of a given calendar year to provide that (i) there will be no such automatic annual increase in the number of shares reserved for issuance under the 2022 Plan or (ii) the increase in the number of shares for such calendar year will be a lesser number of shares than necessary to maintain the Stipulated Percentage of shares reserved for issuance under the 2022 Plan.

On December 16, 2020, the Company adopted its 2020 Long-Term Incentive Plan (the “2020 Plan”). Under the 2020 Plan, there are 5,333,333 shares of the Company’s common stock available for issuance and the 2020 Plan has a term of 10 years. The available shares in the 2020 Plan will automatically increase on the first trading day in January of each calendar year during the term of this Plan, commencing with January 2021, by an amount equal to the lesser of (i) five percent (5%) of the total number of shares of common stock issued and outstanding on December 31 of the immediately preceding calendar year, (ii) 1,000,000 shares of common stock or (iii) such number of shares of common stock as may be established by the Company’s Board of Directors.

The Company grants equity-based compensation under its 2020 Plan and its 2016 Equity Incentive Plan (the “Plan”). The 2020 Plan and 2016 Plan allows the Company to grant incentive and nonqualified stock options, and shares of restricted stock to its employees, directors and consultants. On June 14, 2019, the Board of Directors of the Company approved increasing the number of shares allocated to the Company’s 2016 Equity Incentive Plan from 5,500,000 to 7,333,333.

Under the 2016 Plan and the 2020 Plan, upon the exercise of stock options and issuance of fully vested restricted common stock, shares of common stock may be withheld to satisfy tax withholdings.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Restricted Share Units and Options	(b) Weighted- Average Exercise Price of Outstanding Options	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	17,973,158	N/A	5,077,280
Equity compensation plans not approved by security holders	-	N/A	-
Total	<u>17,973,158</u>	N/A	<u>5,077,280</u>

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS.

Other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive Compensation”, since April 1, 2018 we have not been a party to any transaction or arrangement in which the amount involved in the transaction exceeded 1% of the average of our total assets at December 31, 2022 and 2021 in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of any class of our voting securities or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The following table sets forth fees billed to us by our independent auditors for the year ended December 31, 2022 and the nine months ended December 31, 2021 for (i) services rendered for the audit of our annual financial statements and the review of our quarterly financial statements, (ii) services rendered that are reasonably related to the performance of the audit or review of our financial statements that are not reported as Audit Fees, and (iii) services rendered in connection with tax preparation, compliance, advice and assistance.

Marcum LLP

SERVICES	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Audit fees	\$ 206,510	\$ 124,630
Audit-related fees	-	-
Tax fees	16,700	14,317
All other fees	90,365	7,725
Total fees	<u>\$ 313,575</u>	<u>\$ 146,672</u>

Audit fees and audit related fees represent amounts billed for professional services rendered for the audit of our annual financial statements and the review of our interim financial statements. Before our independent accountants were engaged to render these services, their engagement was approved by our Directors.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

(a)(1) Financial statements.

The financial statements and supplementary data required by this item begin on page F-1.

(a)(2) Financial Statement Schedules.

All schedules are omitted because the required information is inapplicable or the information is presented in the financial statements and the related notes.

(a)(3) Exhibits.

Exhibit No.	Exhibit Description
3.1	Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the registrant's Form S-1/A filed on September 18, 2019).
3.2	Certificate of Amendment to Certificate of Incorporation of Crown Electrokinetics Corp. (incorporated by reference to Exhibit 3.1 to the registrant's Form 8-K filed on January 27, 2021).
3.3	By-laws (incorporated by reference to Exhibit 3.2 to the registrant's Form S-1/A filed on September 18, 2019).
3.4	Form of Amended and Restated Certificate of Designations, Preferences and Rights of Series A Preferred Stock of Crown Electrokinetics Corp. (incorporated by reference to Exhibit 3.3 to the registrant's Form S-1/A filed on January 25, 2021).
3.5	Form of Amended and Restated Certificate of Designations, Preferences and Rights of Series B Preferred Stock of Crown Electrokinetics Corp. (incorporated by reference to Exhibit 3.4 to the registrant's Form S-1/A filed on January 25, 2021).
3.6	Form of Certificate of Designations, Preferences and Rights of Series C Preferred Stock of Crown Electrokinetics Corp. (incorporated by reference to Exhibit 3.1 to the registrant's Form 8-K filed on April 6, 2021).
3.7	Certificate of Designations, Preferences and Rights of Series D Preferred Stock of Crown Electrokinetics Corp. (incorporated by reference to Exhibit 3.4 to the registrant's Form 8-K filed on July 8, 2022).
4.1	Form of Warrant, dated June 3, 2020, by and between the registrant and Hudson Pacific Properties, L.P. (incorporated by reference to Exhibit 4.1 to the registrant's Form 8-K filed on April 6, 2021).
4.2	Form of Warrant, dated January 28, 2021, by and between the registrant and Roth Capital Partners, LLC (incorporated by reference to Exhibit 4.1 to the registrant's Form 8-K filed on January 27, 2021).
4.3	Form of Warrant, dated July 19, 2022, by and between the registrant and Roth Capital Partners, LLC (incorporated by reference to Exhibit 4.1 to the registrant's Form 8-K filed on July 22, 2022).
4.4	Form of Warrant, dated July 26, 2022, by and between the registrant and certain investors (incorporated by reference to Exhibit 4.1 to the registrant's Form 8-K filed on July 29, 2022).
4.5	Form of Warrant, by and between the registrant and certain investors (incorporated by reference to Exhibit 4.1 to the registrant's Form 8-K filed on October 20, 2022).
4.6	Form of Senior Note, by and between the registrant and certain investors (incorporated by reference to Exhibit 4.2 to the registrant's Form 8-K filed on October 20, 2022).
10.1	Intellectual Property Agreement, dated as of January 31, 2016, between Hewlett-Packard Development Company, L.P. and 3D Nanocolor Corp. (and amendments thereto) (incorporated by reference to Exhibit 10.1 to the registrant's Form S-1/A filed on September 18, 2019).
10.2	Fourth Amendment to Intellectual Property Agreement, dated February 4, 2021, by and among Hewlett-Packard Development Company, L.P., HP, Inc. and Crown Electrokinetics Corp. (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K filed on February 10, 2021).
10.3	Collaboration Agreement, dated as of August 23, 2017, between 3D Nanocolor Corp. and Eastman Chemical Company (and amendment thereto) (incorporated by reference to Exhibit 10.2 to the registrant's Form S-1/A filed on September 18, 2019).
10.4	Agreement, dated as of November 15, 2017, between Crown Electrokinetics Corp. and Asahi Glass Co., Ltd. (and amendment thereto) (incorporated by reference to Exhibit 10.3 to the registrant's Form S-1/A filed on September 18, 2019).
10.5	Agreement, dated as of February 1, 2019, between Crown Electrokinetics Corp. and AGC Inc. (f/k/a Asahi Glass Co., Ltd.) (incorporated by reference to Exhibit 10.4 to the registrant's Form S-1/A filed on September 18, 2019).
10.6	Employment Agreement, dated June 16, 2021, by and between Crown Electrokinetics Corp. and Doug Croxall (incorporated by reference to Exhibit 10.6 to the registrant's Transition Report on Form 10-KT filed on March 30, 2022).
10.7	Employment Agreement, dated February 20, 2021, by and between Crown Electrokinetics Corp. and Edward Kovalik (incorporated by reference to Exhibit 10.7 to the registrant's Transition Report on Form 10-KT filed on March 30, 2022).
10.8	Independent Contractor/Consulting Agreement, dated February 25, 2021, by and between Crown Electrokinetics Corp. and Kaizen Reserve, Inc. (incorporated by reference to Exhibit 10.8 to the registrant's Transition Report on Form 10-KT filed on March 30, 2022).
10.9	Employment Agreement, dated June 21, 2021, by and between Crown Electrokinetics Corp. and Joel Krutz (incorporated by reference to Exhibit 10.9 to the registrant's Transition Report on Form 10-KT filed on March 30, 2022).

10.10	<u>Master Supply Agreement, dated September 27, 2021, between MetroSpaces Inc. and Crown Electrokinetics Corp. (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K filed on September 30, 2021).</u>
10.11	<u>Master Supply Agreement, dated December 23, 2021, between Hudson Pacific Properties, L.P. and Crown Electrokinetics Corp. (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K filed on December 23, 2021).</u>
10.12	<u>Master Supply Agreement, dated March 25, 2022, between Brandywine Operating Partnership, L.P. and Crown Electrokinetics Corp. (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K filed on March 28, 2022).</u>
10.13	<u>Sales Agreement, dated as of March 30, 2022, by and between Crown Electrokinetics Corp. and A.G.P./Alliance Global Partners (incorporated by reference to Exhibit 10.1 of the registrant's Form 8-K filed on March 31, 2022).</u>
10.14	<u>Form of Securities Purchase Agreement, dated July 26, 2022, between the Company and the Purchasers (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K dated July 29, 2022).</u>
10.15	<u>Form of Registration Rights Agreement, dated July 26, 2022, between the Company and the Purchasers (incorporated by reference to Exhibit 10.2 to the registrant's Form 8-K filed on July 29, 2022).</u>
10.16	<u>Form of Securities Purchase Agreement, dated October 19, 2022, between the Company and the Investors (incorporated by reference to Exhibit 10.1 to the registrant's Form 8-K filed on October 20, 2022).</u>
10.17	<u>Form of Registration Rights Agreement, dated October 19, 2022, between the Company and the Investors (incorporated by reference to Exhibit 10.2 to the registrant's Form 8-K filed on October 20, 2022).</u>
10.18	<u>Form of Security Agreement, dated October 19, 2022, between the Company and the Collateral Agent (incorporated by reference to Exhibit 10.3 to the registrant's Form 8-K filed on October 20, 2022).</u>
21.1	<u>List of Subsidiaries of the Registrant *</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14 and Rule 15d-14(a), promulgated under the Securities Exchange Act of 1934, as amended.*</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14 and Rule 15d-14(a), promulgated under the Securities Exchange Act of 1934, as amended.*</u>
32.1	<u>Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer)*</u>
32.2	<u>Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Financial Officer)*</u>
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

ITEM 16. FORM 10-K SUMMARY.

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 31, 2023

CROWN ELECTROKINETICS CORP.

By: /s/ Doug Croxall
Doug Croxall
Chief Executive Officer
(Principal Executive Officer)

Date: March 31, 2023

By: /s/ Joel Krutz
Joel Krutz
Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that the undersigned officers and/or directors of the Registrant, by virtue of their signatures to this report, appearing below, hereby constitute and appoint Doug Croxall and Joel Krutz, or any one of them, with full power of substitution, as attorneys-in-fact in their names, places and steads to execute any and all amendments to this report in the capacities set forth opposite their names and hereby ratify all that said attorneys-in-fact do by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/ Doug Croxall Dated: March 31, 2023
Name: Doug Croxall
Title: Chairman and Chief Executive Officer
(Principal Executive Officer)

/s/ Joel Krutz Dated: March 31, 2023
Name: Joel Krutz
Title: Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)

/s/ Dr. DJ Nag Dated: March 31, 2023
Name: Dr. DJ Nag
Title: Director

/s/ Daniel Marcus Dated: March 31, 2023
Name: Daniel Marcus
Title: Director

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of
Crown Electrokinetics Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Crown Electrokinetics Corp. (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of operations, stockholders' equity and cash flows for the year ended December 31, 2022 and the nine-month period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the year ended December 31, 2022 and the nine-month period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America .

Explanatory Paragraph – Change in Accounting Principle

As discussed in Note 2 to the financial statements, the Company changed its method of accounting for leases in 2022 due to the adoption of ASU No. 2016-02, Leases (Topic 842), as amended, effective January 1, 2022, using the modified retrospective approach.

Explanatory Paragraph – Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2017
Costa Mesa, California
March 31, 2023

CROWN ELECTROKINETICS, CORP.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	<u>December 31,</u> <u>2022</u>	<u>December 31,</u> <u>2021</u>
ASSETS		
Current assets:		
Cash	\$ 821	\$ 6,130
Prepaid and other current assets	590	687
Total current assets	<u>1,411</u>	<u>6,817</u>
Property and equipment, net	1,409	895
Intangible assets, net	1,598	1,761
Right of use asset	1,842	-
Deferred debt issuance costs	150	-
Other assets	180	179
TOTAL ASSETS	<u>\$ 6,590</u>	<u>\$ 9,652</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 865	\$ 358
Accrued expenses	621	298
Lease liability - current portion	574	-
Warrant liability	972	-
Notes payable at fair value	1,654	-
Notes payable	8	8
Total current liabilities	<u>4,694</u>	<u>664</u>
Lease liability	1,366	-
Total liabilities	<u>6,060</u>	<u>664</u>
Commitments and Contingencies (Note 12)		
STOCKHOLDERS' EQUITY:		
Preferred stock, par value \$0.0001; 50,000,000 shares authorized, no shares outstanding	-	-
Series A preferred stock, par value \$0.0001; 300 shares authorized, 251 shares outstanding as of December 31, 2022 and 2021	-	-
Series B preferred stock, par value \$0.0001; 1,500 shares authorized, 1,443 shares outstanding as of December 31, 2022 and 2021	-	-
Series C preferred stock, par value \$0.0001; 600,000 shares authorized, 500,756 shares outstanding as of December 31, 2022 and 2021	-	-
Series D preferred stock, par value \$0.0001; 7,000 shares authorized, 1,058 shares issued and outstanding as of December 31, 2022; liquidation preference \$1,113 as of December 31, 2022; No shares authorized, or outstanding, and no liquidation preference as of December 31, 2021	-	-
Common stock, par value \$0.0001; 800,000,000 shares authorized; 20,243,509 and 14,530,126 shares outstanding as of December 31, 2022 and 2021, respectively	2	1
Additional paid-in capital	88,533	82,677
Accumulated deficit	(88,005)	(73,690)
Total stockholders' equity	<u>530</u>	<u>8,988</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 6,590</u>	<u>\$ 9,652</u>

The accompanying notes are an integral part of these consolidated financial statements.

CROWN ELECTROKINETICS, CORP.
Consolidated Statements of Operations
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021
(in thousands, except share and per share amounts)

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Operating expenses:		
Research and development	\$ 4,107	\$ 2,496
Selling, general and administrative	11,001	14,367
Total operating expenses	15,108	16,863
Loss from operations	(15,108)	(16,863)
Other income (expense):		
Other expense	(74)	(55)
Interest expense	(7)	(7)
Change in fair value of warrant liability	1,023	-
Change in fair value of notes	(149)	-
Gain on extinguishment of debt	-	7
Gain on forgiveness of PPP loan	-	431
Total other income	793	376
Net loss	(14,315)	(16,487)
Cumulative dividends on Series D preferred stock	(55)	-
Net loss attributable to common stockholders	\$ (14,370)	\$ (16,487)
Net loss per share attributable to common stockholders	\$ (0.82)	\$ (1.13)
Weighted average shares outstanding, basic and diluted:	17,436,174	14,596,019

The accompanying notes are an integral part of these consolidated financial statements.

CROWN ELECTROKINETICS, CORP.
Consolidated Statements of Stockholders' Equity
Year Ended December 31, 2022 and Nine Months Ended 2021
(in thousands, except share and per share amounts)

	Series A Preferred Stock		Series B Preferred Stock		Series C Preferred Stock		Series D Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount			
Balance as of March 31, 2021	251	\$ -	1,443	\$ -	500,756	\$ -	-	\$ -	14,856,480	\$ 1	\$ 73,789	\$ (57,203)	\$ 16,587
Issuance of common stock in connection with consulting agreements	-	-	-	-	-	-	-	-	64,261	-	244	-	244
Restricted stock awards exchanged for restricted stock units	-	-	-	-	-	-	-	-	(800,000)	-	-	-	-
Stock option exercises	-	-	-	-	-	-	-	-	409,385	-	186	-	186
Stock-based compensation	-	-	-	-	-	-	-	-	-	-	8,458	-	8,458
Net loss	-	-	-	-	-	-	-	-	-	-	-	(16,487)	(16,487)
Balance as of December 31, 2021	251	\$ -	1,443	\$ -	500,756	\$ -	-	\$ -	\$14,530,126	\$ 1	\$ 82,677	\$ (73,690)	\$ 8,988
Issuance of common stock and warrants, net of fees	-	-	-	-	-	-	-	-	1,250,000	-	855	-	855
Issuance of common stock warrants in connection with SLOC	-	-	-	-	-	-	-	-	-	-	223	-	223
Issuance of Series D preferred stock and warrants, net of fees	-	-	-	-	-	-	1,058	-	-	-	1,039	-	1,039
Issuance of common stock/At-the-market offering, net of offering costs	-	-	-	-	-	-	-	-	3,368,146	-	1,249	-	1,249
Issuance of common stock warrants in connection with consideration payable	-	-	-	-	-	-	-	-	-	-	86	-	86
Stock-based compensation	-	-	-	-	-	-	-	-	1,095,237	1	2,404	-	2,405
Net loss	-	-	-	-	-	-	-	-	-	-	-	(14,315)	(14,315)
Balance as of December 31, 2022	251	\$ -	1,443	\$ -	500,756	\$ -	1,058	\$ -	20,243,509	\$ 2	\$ 88,533	\$ (88,005)	\$ 530

The accompanying notes are an integral part of these consolidated financial statements.

CROWN ELECTROKINETICS, CORP.
Consolidated Statements of Cash Flows
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021
(in thousands, except share and per share amounts)

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	(14,315)	\$ (16,487)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	2,405	8,458
Issuance of common stock to consultants	-	244
Depreciation and amortization	503	225
Loss on extinguishment of debt	-	(7)
Gain on forgiveness of PPP loan	-	(431)
Change in fair value of warrant liability	(1,023)	-
Change in fair value of notes	149	-
Loss on disposal of equipment	52	-
Amortization of deferred debt issuance costs	73	-
Amortization of right of use assets	494	-
Changes in operating assets and liabilities:		
Prepaid and other assets	182	(500)
Accounts payable	413	(126)
Accrued expenses	323	87
Lease liability	(396)	-
Net cash used in operating activities	<u>(11,140)</u>	<u>(8,537)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of equipment	(751)	(552)
Purchase of patents	(61)	(264)
Net cash used in investing activities	<u>(812)</u>	<u>(816)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from the issuance of common stock and warrants, net of fees	855	-
Proceeds from the issuance of common stock / At-the-market offering	1,295	-
Offering costs for the issuance of common stock / At-the-market offering	(46)	-
Proceeds from issuance of senior secured convertible notes and common stock warrants	3,500	-
Proceeds from issuance of Series D preferred stock and warrants, net of fees	1,039	-
Proceeds from exercise of stock options	-	186
Net cash provided by financing activities	<u>6,643</u>	<u>186</u>
Net decrease in cash	(5,309)	(9,167)
Cash — beginning of year	6,130	15,297
Cash — end of year	<u>\$ 821</u>	<u>\$ 6,130</u>
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Issuance of common stock warrants in connection with SLOC	\$ 223	\$ -
Issuance of common stock warrants in connection with consideration payable	\$ 86	\$ -
Unpaid equipment included in accounts payable	\$ 94	\$ 206
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	<u>\$ 7</u>	<u>\$ 6</u>

The accompanying notes are an integral part of these consolidated financial statements.

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

Note 1 – Organization and Description of Business Operations

Crown Electrokinetics Corp. (the “Company”) was incorporated in the State of Delaware on April 20, 2015. Effective October 6, 2017, the Company’s name was changed to Crown Electrokinetics Corp. from 3D Nanocolor Corp. (“3D Nanocolor”).

On January 26, 2021, the Company completed its public offering and its common stock began trading on the Nasdaq Capital Market (Nasdaq) under the symbol CRKN.

The Company is commercializing technology for smart or dynamic glass. The Company’s electrokinetic glass technology is an advancement on microfluidic technology that was originally developed by HP Inc.

On December 20, 2022, the Company incorporated Crown Fiber Optics Corp., a Delaware based entity, to own and operate its acquired business from the acquisition of Amerigen 7 in the January 2023 (See Note 14). Crown Fiber Optics Corp. will be accounted for as a wholly- owned subsidiary of Crown Electrokinetics, Corp.

Reverse Stock Split

On January 22, 2021, the Company’s Board of Directors authorized a reverse stock split at an exchange ratio of one (1) share of common stock for every three (3) shares of common stock. The reverse stock split was effective on January 25, 2021, such that every three (3) shares of common stock have been automatically converted into one (1) share of common stock. The Company did not issue fractional certificates for post-reverse split shares in connection with the reverse stock split. Rather, all shares of common stock that are held by a stockholder were aggregated and each stockholder received the number of whole shares resulting from the combination of the shares so aggregated. Any fractions resulting from the reverse stock split computation were rounded up to the next whole share.

All of the Company’s share and per share amounts of common stock included in this Form 10-K for the nine months ended December 31, 2021 and as of December 31, 2021 have been retroactively adjusted to reflect the reverse stock split.

Public Offering

On January 26, 2021, the Company entered into an underwriting agreement relating to the public offering of its common stock, par value \$0.0001 per share. The Company issued 4,772,500 shares of its common stock to the underwriters, at a purchase price per share of \$4.14 (the offering price to the public of \$4.50 per share minus the underwriters’ discount). On January 28, 2021, the Company received net proceeds from its public offering of approximately \$19.3 million, net of underwriter fees and commissions of approximately \$1.7 million, and offering costs of \$0.5 million.

In connection with the Company’s public offering, the Company issued a warrant to the underwriters to purchase 381,800 shares of its common stock. The warrant is exercisable beginning on the date that is 180 days after the date on which the Registration Statement becomes effective until the date that is five years after the date on which the Registration Statement becomes effective. The exercise price of the warrant is \$5.625.

On July 19, 2022, the Company entered into an underwriting agreement relating to the Company’s public offering of its common stock, par value \$0.0001 per share. The Company agreed to sell 1,250,000 shares of its common stock to the underwriters, at a purchase price per share of \$0.744 (the offering price to the public of \$0.80 per share minus the underwriters’ discount), pursuant to the Company’s registration statement on Form S-3 (File No. 333-262122), under the Securities Act of 1933, as amended. The Company has also granted the underwriters a 30-day option to purchase up to 187,500 additional shares of common stock to cover over-allotments. On July 22, 2022, the Company received net proceeds of \$855,000, net of underwriter fees and commissions of approximately \$70,000, and offering costs of \$75,000.

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

In connection with the Company's public offering, the Company issued a warrant to the underwriters to purchase 62,500 shares of its common stock. The warrant may be exercised beginning on the date that is 180 days after July 22, 2022 until July 19, 2027. The exercise price of the warrant is \$0.80 per share.

Common stock

On December 22, 2022, the Company's Board of Directors approved increasing the Company's authorized shares of common stock from 200,000,000 to 800,000,000 shares.

Series E Preferred Stock

On February 1, 2023, the Company's Board of Directors authorized 77,000 shares of Series E preferred stock with a par value of \$0.0001 per share. Each share of Series E Preferred Stock is convertible into 1,000 shares of the Company's common stock at the option of the holders (See Note 14).

Change in Fiscal Year

On November 10, 2021, the Board of Directors of the Company approved a change in its fiscal year end from March 31st to December 31st. As a result, the Company's results of operations, cash flows, and all transactions impacting shareholders equity presented in this Annual Report on Form 10-K are for the calendar year ended December 31, 2022 and the nine months ended December 31, 2021. As such, the Company's calendar year end 2021, refers to the period from April 1, 2021, to December 31, 2021.

Note 2 – Liquidity, Financial Condition, and Going Concern

The Company has incurred substantial operating losses since its inception, and expects to continue to incur significant operating losses for the foreseeable future and may never become profitable. As reflected in the consolidated financial statements, the Company had an accumulated deficit of approximately \$88.0 million and negative working capital of approximately \$3.3 million at December 31, 2022, a net loss of approximately \$14.3 million, approximately \$11.1 million of net cash used in operating activities, and \$0.8 million of net cash used in investing activities for the year ended December 31, 2022. The Company expects to continue to incur ongoing administrative and other expenses, including public company expenses.

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

The Company will seek to obtain additional capital through the sale of debt or equity financings or other arrangements to fund operations including through its existing At-The-Market, \$10 million Standing Letter of Credit, and \$100 million Line of Credit facilities; however, there can be no assurance that the Company will be able to raise needed capital under acceptable terms, if at all. The sale of additional equity may dilute existing stockholders and newly issued shares may contain senior rights and preferences compared to currently outstanding shares of common stock. Issued debt securities may contain covenants and limit the Company's ability to pay dividends or make other distributions to stockholders. If the Company is unable to obtain such additional financing, future operations would need to be scaled back or discontinued. Due to the uncertainty in the Company's ability to raise capital, management believes that there is substantial doubt in the Company's ability to continue as a going concern for twelve months from the issuance of these financial statements.

Standby Letter of Credit

On March 23rd, 2022, the Company entered into an Irrevocable \$10 million Standby Letter of Credit ("SLOC"). The SLOC accrues interest at a rate of 12% per annum and matures 2 years from the issuance date of the SLOC. Interest is payable quarterly. In connection with the SLOC, the Company will issue 50,000 shares of its restricted common stock with each cash draw of \$1.0 million. Drawdowns are capped at a maximum of \$5 million in the first six months. The Company did not drawdown any SLOC funds during the year ended December 31, 2022, and intends to drawdown on the available funds only as necessary in 2023.

Series D Preferred Stock

The Company settled \$1.0 million of shares liability, by issuing 1,058 shares of Series D preferred stock in July 2022 (See Note 10).

Senior Convertible Notes and Warrants

On October 19, 2022, the Company issued senior secured convertible notes (the "Notes") with a principal balance of approximately \$5.4 million, and warrants to purchase 21,749,402 shares of the Company's common stock for net proceeds of \$3.5 million (See Note 9).

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

At-the-Market Offerings

The Company entered into a Sales Agreement with A.G.P./Alliance Global Partners (the “Sales Agents”) dated March 30, 2022 (the “Sales Agreement”), pursuant to which the Company may, from time to time, sell up to \$5 million in shares (the “Placement Shares”) of the Company’s common stock through the Sales Agents, acting as the Company’s sales agent and/or principal, in a continuous at-the-market offering (the “ATM Offering”). The Company will pay the Sales Agents a commission of up to 3.0% of the aggregate gross proceeds the Company receives from all sales of the Company’s common stock under the Sales Agreement. The Placement Shares will be offered and sold pursuant to the Company’s shelf registration statement on Form S-3 (Registration No. 333- 262122) and the related base prospectus included in the registration statement, as supplemented by the prospectus supplement dated March 30, 2022.

On October 5, 2022, the Company and the Sales Agents filed the first amendment to the Sales Agreement (the “First Amendment to the Sales Agreement”). Pursuant to the First Amendment to the Sales Agreement, the Company may from time to time, sell up to \$3.5 million in Placement Shares of the Company’s common stock through the Sales Agents in a continuous At-the-Market Offering (the Amended ATM Offering”). According to the First Amendment to the Sales Agreement, the Company will pay the Sales Agents a commission of up to 3.0% of the aggregate gross proceeds the Company receives from all sales of its common stock in the Amended ATM Offering.

As of December 31, 2022, the Company has received net proceeds on sales of 3,368,146 shares of common stock under the Sales Agreement of approximately \$1.25 million (after deducting \$0.05 million in commissions and expenses) at a weighted average price of \$0.385 per share.

2023 Line of Credit

On February 2, 2023, the Company entered into a line of credit (the “Line of Credit”) securing a line of credit up to \$100.0 million. The Line of Credit will be used to fund expenses related to the fulfillment of contracts with customers of the Company’s wholly-owned subsidiary, Crown Fiber Optics Corporation. The Line of Credit expires February 2, 2024, unless the Line of Credit is extended for one or two additional years in accordance with its terms. On February 2, 2023, the Company withdrew \$2.0 million under the Line of Credit.

Although it is difficult to predict the Company’s liquidity requirements as of December 31, 2022, based upon the Company’s current operating plan, cash on hand, the proceeds from the issuance of its senior secured convertible notes payable and warrants, and its SLOC and Letter of Credit funding, management believes that the Company will have sufficient cash to meet its projected operating requirements for at least the next 12 months following the issuance of these financial statements.

Risks and Uncertainties

The Company is currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by geopolitical instability due to the ongoing military conflict between Russia and Ukraine. The Company’s financial condition and results of operations may be materially adversely affected by any negative impact on the global economy and capital markets resulting from the conflict in Ukraine or any other geopolitical tensions.

The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

Note 3 – Basis of Presentation and Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") as determined by the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") and include all adjustments necessary for the fair presentation of its balance sheet, results of operations and cash flows for the periods presented. The accompanying consolidated financial statements of the Company include the accounts of the Company and its wholly or majority owned and controlled subsidiaries. Consolidated subsidiaries results are included from the date the subsidiary was formed or acquired. Intercompany investments, balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's consolidated financial statements relate to the valuation of its senior secured convertible notes and warrants, and equity based awards. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. There were no cash equivalents as of December 31, 2022 and 2021.

Concentrations of Credit Risk and Off-balance Sheet Risk

Cash and cash equivalents are financial instruments that are potentially subject to concentrations of credit risk. The Company's cash and cash equivalents are deposited in accounts at large financial institutions, and amounts may exceed the standard federally insured limits totaling \$250,000. The Company believes it is not exposed to significant credit risk due to the adoption of new banking products that provide additional federal insurance with coverage up to \$125 million per entity in the depository institutions in which the cash and cash equivalents are held. The Company has no financial instruments with off-balance sheet risk of loss as of December 31, 2022 and 2021.

Property and Equipment

Property and equipment are stated at cost and depreciated over the estimated useful lives of the assets. Depreciation is recorded using the straight-line method over the estimated useful lives of the respective assets, generally three to ten years.

Definite-lived Intangible Assets

Intangible assets with finite lives are comprised of patents and licenses for developed technology, which are amortized on a straight-line basis over their expected useful lives, which is their contractual term or estimated useful life. Patents consist of filing and legal fees incurred, which are initially recorded at cost.

Impairment of Long-lived Assets and Definite-lived intangibles

The Company reviews long-lived assets (including property and equipment, lease related ROU Assets, and definite-lived intangible assets) for impairment whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. Recoverability of assets is determined by first grouping the long-lived assets at the lowest level for which there are identifiable cash flows, and then comparing the carrying value of each asset group to its forecasted undiscounted cash flows. If the evaluation of the forecasted cash flows indicates that the carrying value of the assets is not recoverable, an impairment test of the asset group is performed. Impairment is recognized if the carrying amount of the asset group exceeds its fair value. The Company performed a test for recoverability at December 31, 2022 and concluded that the carrying value of its long-lived assets was recoverable.

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

Fair Value Measurement

The Company follows the accounting guidance in Accounting Standards Codification (“ASC”) 820 for its fair value measurements of financial assets and liabilities measured at fair value on a recurring basis. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The accounting guidance requires fair value measurements be classified and disclosed in one of the following three categories:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs other than Level 1 prices, for similar assets or liabilities that are directly or indirectly observable in the marketplace.

Level 3: Unobservable inputs which are supported by little or no market activity and that are financial instruments whose values are determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

Convertible Notes

In accordance with Accounting Standards Codification 825, *Financial Instruments* (“ASC 825”), the Company has elected the fair value option for recognition of its Notes. In accordance with ASC 825, the Company recognizes these Notes at fair value with changes in fair value recognized in the statements of operations. The fair value option may be applied instrument by instrument, but it is irrevocable. As a result of applying the fair value option, direct costs and fees related to the convertible notes were recognized in general and administrative expense. The convertible notes issued during the year ended December 31, 2022 are non-interest bearing.

Warrant Liability

The Company accounted for certain common stock warrants outstanding as a liability at fair value and adjusted the instruments to fair value at each reporting period. This liability is subject to re-measurement at each balance sheet date until exercised, and any change in fair value is recognized in the Company’s statements of operations. The fair value of the warrants issued by the Company have been estimated using the Monte Carlo simulation.

Research and Development

Research and development costs, including in-process research and development acquired as part of an asset acquisition for which there is no alternative future use, is expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Stock-Based Compensation

The Company expenses stock-based compensation to employees and non-employees over the requisite service period based on the estimated grant-date fair value of the awards. The Company estimates the fair value of stock option grants using the Black-Scholes option pricing model, and the assumptions used in calculating the fair value of stock-based awards represent management’s best estimates and involve inherent uncertainties and the application of management’s judgment.

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Expected Term - The expected term of options represents the period that the Company's stock-based awards are expected to be outstanding based on the simplified method, which is the half-life from vesting to the end of its contractual term. The simplified method was used because the Company does not have sufficient historical exercise data to provide a reasonable basis for an estimate of expected term.

Expected Volatility - The Company uses a blended volatility that includes its common stock trading history and supplements the remaining historical information with the trading history from the common stock of a set of comparable publicly traded companies.

Risk-Free Interest Rate - The Company bases the risk-free interest rate on the implied yield available on U. S. Treasury zero-coupon issues with an equivalent remaining term.

Expected Dividend - The Company has never declared or paid any cash dividends on its common shares and does not plan to pay cash dividends in the foreseeable future, and, therefore, uses an expected dividend yield of zero in its valuation models.

The Company accounts for forfeited awards as they occur.

Income taxes

Deferred tax assets and liabilities are computed based upon the difference between the financial statement and income tax basis of assets and liabilities using the enacted marginal tax rate applicable when the related asset or liability is expected to be realized or settled. Deferred income tax expenses or benefits are based on the changes in the asset or liability each period. If available evidence suggests that it is more likely than not that some portion or all of the deferred tax assets will not be realized, a valuation allowance is required to reduce the deferred tax assets to the amount that is more likely than not to be realized. Future changes in such valuation allowance are included in the provision for deferred income taxes in the period of change.

ASC Topic 740, Income Taxes, ("ASC 740"), also clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements and prescribes a recognition threshold and measurement process for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. ASC 740 also provides guidance on derecognition, classification, interest and penalties, accounting in interim period, disclosure and transition. Based on the Company's evaluation, it has been concluded that there are no significant uncertain tax positions requiring recognition in the Company's consolidated financial statements. The Company believes that its income tax positions and deductions would be sustained on audit and does not anticipate any adjustments that would result in material changes to its financial position.

In its consolidated financial statements, the Company utilizes an expected annual effective tax rate in determining its income tax provisions for the interim periods. That rate differs from U.S. statutory rates primarily as a result of valuation allowance related to the Company's net operating loss carryforward as a result of the historical losses of the Company.

Leases

The Company accounts for its leases under the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 842, *Leases*. Under this guidance, arrangements meeting the definition of a lease are classified as operating or financing leases and are recorded on the consolidated balance sheet as both a right of use asset and lease liability, calculated by discounting fixed lease payments over the lease term at the rate implicit in the lease or the Company's incremental borrowing rate. Lease liabilities are increased by interest and reduced by payments each period, and the right of use asset is amortized over the lease term. For operating leases, interest on the lease liability and the amortization of the right of use asset result in straight-line rent expense over the lease term.

In calculating the right of use asset and lease liability, the Company elects to combine lease and non-lease components as permitted under ASC 842. The Company excludes short-term leases having initial terms of 12 months or less from the new guidance as an accounting policy election and recognizes rent expense on a straight-line basis over the lease term.

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Warrants

SLOC

The Company accounts for its warrants related to the SLOC in accordance with ASC 815-40, *Contracts in Entity's Own Equity*. The warrants to purchase the Company's common stock meet the criteria in ASC 815-40 to be classified within stockholders' equity, and therefore, the warrants are not revalued after issuance. The Company uses a Black-Scholes model to value the warrants at issuance.

Under the guidance of ASU 2015-15, *Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements*, the Company concluded the warrants should be recorded as a deferred asset. At issuance and as of December 31, 2022, since no loan amounts were drawn down, the SLOC warrant is recorded as a deferred asset at fair value and will be amortized over the life of the SLOC. Upon a draw down, the remaining balance of the deferred asset would be reclassified to debt discount and amortized under the effective interest method over the one-year term of the loan (See Note 11).

Purchase Order Warrants

The Company accounts for its warrants issued in connection with purchase orders in accordance with ASC 606, *Revenue Recognition*. With respect to the warrant, the Company accounts for it as consideration payable to a customer under ASC 606, as it relates to the future purchase of the Company's Smart Window Inserts™. Pursuant to ASC 718 *Compensation - Stock Compensation* ("ASC 718"), the Company measured the fair value of the warrant using the Black-Scholes valuation model on the issuance date, with the value being recognized as a prepaid asset up to the recoverable value represented by the value of the contract (See Note 11).

Net Loss per Share

ASC 260, Earnings Per Share, requires dual presentation of basic and diluted earnings per share ("EPS") with a reconciliation of the numerator and denominator of the basic EPS computation to the numerator and denominator of the diluted EPS computation. Basic EPS excludes dilution. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the entity.

Basic net loss per share of common stock and is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the period. Diluted net loss per share of common stock reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the entity unless inclusion of such shares would be anti-dilutive. Since the Company has only incurred losses, basic and diluted net loss per share is the same.

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The following table presents the computation of basic and diluted net loss per common share (in thousands, except share and per share amounts):

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Numerator		
Net loss	\$ (14,315)	\$ (16,487)
Cumulative dividends on Series D preferred stock	(55)	-
Numerator for basic and diluted net loss per share	<u>\$ (14,370)</u>	<u>\$ (16,487)</u>
Denominator		
Weighted-average common shares outstanding	17,552,451	15,669,636
Less: weighted-average shares subject to repurchase	(116,278)	(1,073,617)
Denominator for basic and diluted net loss per share	<u>17,436,173</u>	<u>14,596,019</u>
Shares used to compute pro forma net loss per share, basic and diluted		
Net loss per share:		
Basic and diluted	<u>\$ (0.82)</u>	<u>\$ (1.13)</u>

Securities that could potentially dilute loss per share in the future that were not included in the computation of diluted loss per share at December 31, 2022 and 2021 are as follows:

	December 31,	
	2022	2021
	(Unaudited)	
Series A preferred stock	188,311	188,311
Series B preferred stock	2,019,038	2,019,038
Series C preferred stock	560,757	560,757
Series D preferred stock	814,102	-
Warrants to purchase common stock (excluding penny warrants)	27,661,181	4,525,177
Options to purchase common stock	9,513,624	11,135,432
Unvested restricted stock units	<u>628,780</u>	<u>1,939,683</u>
	<u>41,385,793</u>	<u>20,368,398</u>

Emerging Growth Company

The Company is considered to be an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended (JOBS Act). The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The Company has elected to use the extended transition period for complying with any new or revised financial accounting standards pursuant to Section 13(a) of the Securities and Exchange Act of 1934.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued ASU 2016-02, *Leases (Topic 842)* which supersedes FASB Topic 840, *Leases (Topic 840)* and provides principles for the recognition, measurement, presentation and disclosure of leases for both lessees and lessors. The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than twelve months regardless of classification. Leases with a term of twelve months or less will be accounted for similar to existing guidance for operating leases. In January 2018, the FASB issued ASU 2018-01, *Leases (Topic 842) Land Easement Practical Expedient for Transition to Topic 842*, which amends ASU 2016-02 to provide entities an optional transition practical expedient to not evaluate under Topic 842 existing or expired land easements that were not previously accounted for as leases under the current lease guidance in Topic 842. An entity that elects this practical expedient should evaluate new or modified land easements under Topic 842 beginning at the date that the entity adopts Topic 842. The standard will be effective for non-public entities for fiscal years beginning after December 15, 2022 and interim periods beginning after December 15, 2023. The Company adopted ASC 842 as of January 1, 2022 using the optional transition method to apply the standard as of the effective date. Accordingly, previously reported financial statements, including footnote disclosures, have not been recast to reflect the application of the new standard to all comparative periods presented. Adoption of the new lease standard on January 1, 2022 had a material impact on the Company’s consolidated financial statements. The most significant impacts related to the recognition of ROU assets of \$1.8 million and lease liabilities of \$1.8 million for operating leases on the consolidated balance sheet. ROU assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent the Company’s obligation to make lease payments arising from the lease. The standard did not materially impact the Company’s consolidated statement of operations and consolidated statement of cash flows.

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In August 2020, the FASB issued Accounting Standards Update (“ASU”) No. 2020-06, *Debt-Debt with Conversion and Other Options* (Subtopic 470-20) and *Derivatives and Hedging-Contracts in Entity’s Own Equity* (Subtopic 815-40): *Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*, which simplifies accounting for convertible instruments by removing major separation models required under current GAAP. The ASU removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, and it also simplifies the diluted earnings per share calculation in certain areas. This ASU is effective for annual reporting periods beginning after December 15, 2021, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. This update permits the use of either the modified retrospective or fully retrospective method of transition. On January 1, 2022, the adoption of ASU 2020-06 did not have a material impact on the Company’s consolidated financial statements or disclosures.

In May 2021, the FASB issued ASU 2021-04, *Earnings Per Share* (Topic 260), *Debt-Modifications and Extinguishments* (Subtopic 470-50), *Compensation-Stock Compensation* (Topic 718), and *Derivatives and Hedging-Contracts in Entity’s Own Equity* (Subtopic 815-40). This ASU reduces diversity in an issuer’s accounting for modifications or exchanges of freestanding equity-classified written call options (for example, warrants) that remain equity classified after modification or exchange. This ASU provides guidance for a modification or an exchange of a freestanding equity-classified written call option that is not within the scope of another Topic. It specifically addresses: (1) how an entity should treat a modification of the terms or conditions or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange; (2) how an entity should measure the effect of a modification or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange; and (3) how an entity should recognize the effect of a modification or an exchange of a freestanding equity-classified written call option that remains equity classified after modification or exchange. This ASU will be effective for all entities for fiscal years beginning after December 15, 2021. An entity should apply the amendments prospectively to modifications or exchanges occurring on or after the effective date of the amendments. Early adoption is permitted, including adoption in an interim period. On January 1, 2022, the adoption of ASU 2021-04 did not have a material impact on the Company’s consolidated financial statements or disclosures.

Note 4 – Prepaid and Other Current Assets

Prepaid and other current assets as of December 31, 2022 and 2021 consist of the following:

	December 31, 2022	December 31, 2021
License fees	\$ 300	\$ -
General liability insurance	142	397
Legal and professional fees	-	71
Rent	-	86
Hudson warrant *	85	-
Other	63	133
	<u>\$ 590</u>	<u>\$ 687</u>

* Fair value of warrant issued to Hudson Pacific Properties, L.P. (See Note 11)

Note 5 – Fair Value Measurements

The following table classifies the Company’s liabilities measured at fair value on a recurring basis into the fair value hierarchy as of December 31, 2022:

	Fair value measured at December 31, 2022			
	Total carrying value at December 31, 2022	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Liabilities:				
Convertible notes	\$ 1,654	\$ -	\$ -	\$ 1,654
Warrant liability	\$ 972	\$ -	\$ -	\$ 972

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For the year ended December 31, 2022 there was a change of approximately \$0.9 million in Level 3 liabilities measured at fair value. There were no Level 3 liabilities measured at fair value for the nine months ended December 31, 2021.

The fair value of the convertible notes may change significantly as additional data is obtained, impacting the Company's assumptions used to estimate the fair value of the liabilities. In evaluating this information, considerable judgment is required to interpret the data used to develop the assumptions and estimates. The estimates of fair value may not be indicative of the amounts that could be realized in a current market exchange. Accordingly, the use of different market assumptions and/or different valuation techniques may have a material effect on the estimated fair value amounts, and such changes could materially impact the Company's results of operations in future periods.

The following table presents changes in Level 3 liabilities measured at fair value for the year ended December 31, 2022. Unobservable inputs were used to determine the fair value of positions that the Company has classified within the Level 3 category. Unrealized gains and losses associated with liabilities within the Level 3 category include changes in fair value that were attributable to unobservable (e.g., changes in unobservable long-dated volatilities) inputs.

	Convertible Notes	Warrant Liability
Balance at December 31, 2021	\$ -	\$ -
Issuance of convertible notes and warrants	1,505	1,995
Change in fair value	149	(1,023)
Balance at December 31, 2022	<u>\$ 1,654</u>	<u>\$ 972</u>

Convertible Notes

During the year ended December 31, 2022, the Company issued its Notes. The fair value of the Notes on the issuance dates and as of December 31, 2022 were estimated using a Monte Carlo simulation to capture the path dependencies intrinsic to their terms. The significant unobservable inputs used in the fair value measurement of the Company's convertible notes are the common stock price, volatility, and risk-free interest rates. Significant changes in these inputs may result in significantly lower or higher fair value measurement. The Company elected the fair value option when recording its Notes (See Note 3) and the Notes were classified as liabilities and measured at fair value on the issuance date, with changes in fair value recognized as other income (expense) on the statements of operations and disclosed in the consolidated financial statements.

A summary of significant unobservable inputs (Level 3 inputs) used in measuring the Notes upon the issuance date and as of December 31, 2022 is as follows:

	October 19, 2022	December 31, 2022
Dividend yield	0%	0%
Expected price volatility	48.4%	48.7%
Risk free interest rate	4.60%	4.74%
Expected term (in years)	1.0	0.8

Warrants

During the year ended December 31, 2022, in connection with its convertible notes, the Company issued 21,759,402 warrants to purchase shares of the Company's common stock. The warrants were classified as liabilities and measured at fair value on the grant date, with changes in fair value recognized as other income (expense) on the statements of operations and disclosed in the consolidated financial statements.

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A summary of significant unobservable inputs (Level 3 inputs) used in measuring warrants on issuance date and as of December 31, 2022 is as follows:

	October 19, 2022	December 31, 2022
Dividend yield	0%	0%
Expected price volatility	53.4%	53.9%
Risk free interest rate	4.35%	4.01%
Expected term (in years)	5.0	4.8

Significant changes in the expected price volatility and expected term would result in significantly lower or higher fair value measurement of the warrants, respectively.

Note 6 – Property & Equipment, Net

Property and equipment, net, consists of the following (in thousands):

	December 31, 2022	December 31, 2021
Equipment	\$ 1,457	\$ 1,013
Computers	52	37
Leasehold improvements	362	28
Total	1,871	1,078
Less accumulated depreciation and amortization	(462)	(183)
Property and equipment, net	<u>\$ 1,409</u>	<u>\$ 895</u>

During the year ended December 31, 2022, depreciation expense was approximately \$0.3 million, and the Company recognized a \$0.05 million loss on disposal of equipment. For the nine months ended December 31, 2021, depreciation expense was approximately \$0.1 million.

Note 7 – Intangible Assets, Net

IBM Patents

On July 23, 2021, the Company entered into a Patent Assignment Agreement with International Business Machines Corporation (“IBM”) to acquire an ownership interest in assigned patents. As consideration for the patents, the Company paid \$264,000 (including legal fees of approximately \$38,000).

Intellectual Property

On January 31, 2016, the Company, entered into an IP agreement with HP to acquire a research license to determine the feasibility of incorporating HP’s electro-kinetic display technology in the Company’s products. Under the terms of the agreement, the license is to be used for research purposes only.

Under the guidance of ASC 350, *Intangibles - Goodwill and Other Intangibles*, the Company recorded the research license at the cost to acquire the license. The Company has paid \$375,000 for the transfer of the technology. The research license will be amortized over a 10-year useful life.

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HP Patents

On February 4, 2021, the Company entered into the fourth amendment to the IP agreement with HP. Under the terms of the amendment, the parties agreed to amend the list of patent and patent applications, which includes two additional patents that are assignable to the Company by HP. The Company exercised the option to purchase the assignable patents and paid HP \$1.55 million dollars on February 9, 2021. Upon assignment of the patents, the Company will pay HP a royalty fee based on the cumulative gross revenue received by the Company from the patents as follows:

1. Prior to December 31, 2029:

- Less than \$70,000,000, royalty rate of 0.00%
- \$70,000,000 - \$500,000,000, royalty rate of 1.25%
- \$500,000,000 and beyond, royalty rate of 1.00%

2. After January 1, 2030 and onward, royalty rate of 0.00%

Under the terms of the amendment, HP waived any interest that would have been accrued on the open payable of \$75,000 which was due from the Company related to the license agreement dated January 31, 2016.

Intangible assets, net, consists of the following (in thousands):

	December 31, 2022	December 31, 2021
Patents	\$ 1,800	\$ 1,739
Research license	375	375
Total	<u>2,175</u>	<u>2,114</u>
Accumulated amortization	(577)	(353)
Intangible assets, net	<u>\$ 1,598</u>	<u>\$ 1,761</u>

The following table represents the total estimated amortization of intangible assets for the five succeeding years and thereafter as of December 31, 2022 (in thousands):

	Estimated Amortization Expense
Year ended December 31, 2023	\$ 220
Year ended December 31, 2024	221
Year ended December 31, 2025	220
Year ended December 31, 2026	183
Year ended December 31, 2027 and thereafter	754
Total	<u>\$ 1,598</u>

For the year ended December 31, 2022, and the nine months ended December 31, 2021, amortization expense was approximately \$0.2 million and \$0.15 million, respectively.

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Note 8 – Accrued Expenses

As of December 31, 2022 and 2021, the Company's accrued expenses consisted of the following (in thousands):

	<u>December 31,</u> <u>2022</u>	<u>December 31,</u> <u>2021</u>
General liability insurance	\$ 104	\$ 234
Rent	-	57
Bonus	510	-
Other expenses	7	7
Total	<u>\$ 621</u>	<u>\$ 298</u>

Note 9 – Notes Payable

Senior Secured Convertible Notes

On October 19, 2022, the Company issued its Notes with a principal balance of approximately \$5.4 million, and warrants to purchase 21,749,402 shares of the Company's common stock for net proceeds of \$3.5 million. The Notes were issued with a conversion price at a 54% premium to the most recent closing price, an original issue discount of 35%, do not bear interest, and mature upon the earlier of twelve months from the date of issuance or the closing of a change of control transaction (as defined in the Notes). The Notes are convertible into shares of the Company's common stock at a conversion price of \$0.49 per share, subject to adjustment under certain circumstances described in the Notes. The Notes are secured by all of the Company's assets (subject to exceptions for certain strategic transactions).

The warrants have an exercise price of \$0.32 per share and expire five years from the issuance date (subject to adjustment under certain circumstances described in the warrants).

As of December 31, 2022, the fair value of the Notes was approximately \$1.7 million. During the year ended December 31, 2022, the Company recorded a change in fair value of the Notes totaling \$0.15 million.

There were no convertible notes outstanding as of December 31, 2021.

Paycheck Protection Loan

On April 24, 2020 and March 3, 2021, the Company entered into Promissory Notes (the "PPP Notes") with Newtek Corp AVB as the lender (the "Lender"), pursuant to which the Lender agreed to make loans to the Company under the Paycheck Protection Program (the "PPP Loan") offered by the U.S. Small Business Administration (the "SBA") in principal amounts of \$197,200 and \$233,300 pursuant to Title 1 of the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act").

The PPP Loan proceeds are available to be used to pay for payroll costs, including salaries, commissions, and similar compensation, group health care benefits, and paid leaves; rent; utilities; and interest on certain other outstanding debt. The Loan is subject to forgiveness to the extent proceeds are used for payroll costs, including payments required to continue group health care benefits, and certain rent, utility, and mortgage interest expenses (collectively, "Qualifying Expenses"), pursuant to the terms and limitations of the PPP Loan. The Company used the PPP Loan amounts against Qualifying Expenses, and during the nine months ended December 31, 2021, the total PPP Loan balance of \$430,500 was forgiven.

On June 17, 2020, the Company received an Economic Injury Disaster Loan totaling \$8,000 from the U.S. Small Business Administration. As of December 31, 2022 and 2021, this loan is outstanding.

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Note 10 – Stockholders’ Deficit

Preferred Stock

As of December 31, 2022 and 2021, there were 50,000,000 authorized shares of the Company’s preferred stock, par value \$0.0001.

Series A Preferred Stock

On January 5, 2021, the Company’s Board of Directors authorized 300 shares of Series A preferred stock with a par value of \$0.0001 per share. Each preferred share of Series A preferred stock will have a stated value of \$1,000 per share. From and after the second anniversary the holders of the Series A preferred stock shall be entitled to receive, quarterly cumulative dividends or distributions at the annual rate of 8% of the stated value per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A preferred stock). Such dividend shall be paid in cash or at the direction of the Company’s Board of Directors, in duly authorized, validly issued, fully paid and non-assessable shares of common stock, or a combination thereof. All declared but unpaid dividends on shares of Series A preferred stock shall increase the stated value of such shares, but when such dividends are actually paid any such increase in the stated value shall be rescinded. The holders shall be entitled to receive, and the Company shall pay, dividends on shares of Series A preferred stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the Company’s common stock or other junior securities. The Series A preferred stock has no voting rights. Each share of Series A preferred stock shall be convertible, at any time and from time to time from and after the original issue date at the option of the holder, into that number of shares of common stock determined by dividing the stated value of such shares of Series A preferred stock by the conversion price. The conversion price for the Series A preferred stock shall equal \$1.3329, subject to adjustment.

During the fiscal year ended March 31, 2021, the Company issued 251 shares of its Series A preferred stock in connection with the conversion of its convertible notes, and as of December 31, 2022 and 2021, 251 shares of Series A preferred stock are outstanding.

Series B Preferred Stock

On January 22, 2021, the Company’s Board of Directors authorized 1,500 shares of Series B preferred stock with a par value of \$0.0001 per share. Each preferred share of Series B preferred stock will have a stated value of \$1,000 per share. From and after the second anniversary the holders of the Series B preferred stock shall be entitled to receive, quarterly cumulative dividends or distributions at the annual rate of 8% of the stated value per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B preferred stock). Such dividend shall be paid in cash or at the direction of the Company’s Board of Directors, in duly authorized, validly issued, fully paid and non-assessable shares of common stock, or a combination thereof. All declared but unpaid dividends on shares of Series B preferred stock shall increase the stated value of such shares, but when such dividends are actually paid any such increase in the stated value shall be rescinded. The holders shall be entitled to receive, and the Company shall pay, dividends on shares of Series B preferred stock equal (on an as-if-converted-to-common-stock basis) to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the Company’s common stock or other junior securities. The Series B preferred stock has no voting rights. Each share of Series B preferred stock shall be convertible, at any time and from time to time from and after the original issue date at the option of the holder, into that number of shares of common stock determined by dividing the stated value of such shares of Series B preferred stock by the conversion price. The conversion price for the Series B preferred stock shall equal \$0.7149, subject to adjustment.

During the fiscal year ended March 31, 2021, the Company issued 1,443 shares of its Series B preferred stock in connection with the conversion of its convertible notes, and as of December 31, 2022 and 2021, 1,443 shares of Series B preferred stock are outstanding.

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Series C Preferred Stock

On February 19, 2021, the Company's Board of Directors authorized 600,000 shares of Series C preferred stock with a par value of \$0.0001 per share. Each preferred share of Series C preferred stock will have a stated value of \$1.00 per share. From and after the second anniversary the holders of the Series C preferred stock shall be entitled to receive, quarterly cumulative dividends or distributions at the annual rate of 8% of the stated value per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C preferred stock). Such dividend shall be paid in cash or at the direction of the Company's Board of Directors, in duly authorized, validly issued, fully paid and non-assessable shares of common stock, or a combination thereof. All declared but unpaid dividends on shares of Series C preferred stock shall increase the stated value of such shares, but when such dividends are actually paid any such increase in the stated value shall be rescinded. The holders shall be entitled to receive, and the Company shall pay, dividends on shares of Series C preferred stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the Company's common stock or other junior securities. The Series C preferred stock has no voting rights. Each share of Series C preferred stock shall be convertible, at any time and from time to time from and after the original issue date at the option of the holder, into that number of shares of common stock determined by dividing the stated value of such shares of Series C preferred stock by the conversion price. The conversion price for the Series C preferred stock shall equal \$0.893, subject to adjustment.

During the fiscal year ended March 31, 2021, the Company issued 500,756 shares of its Series C preferred stock in connection with the conversion of its convertible notes, and as of December 31, 2022 and 2021, 500,756 shares of Series C preferred stock are outstanding.

Series D Preferred Stock

On July 8, 2022, the Company's Board of Directors authorized 7,000 shares of Series D preferred stock with a par value of \$0.0001 per share. Each preferred share of Series D preferred stock has a stated value of \$1,000 per share, is convertible into shares of the Company's common stock at an initial conversion price of \$1.30 per share, and is entitled to a dividend of 12% per annum. The cumulative dividends shall be paid in common stock based on the conversion price in effect on the applicable conversion date. All accrued but unpaid dividends on shares of Series D preferred stock shall increase the stated value of such shares. The Company may redeem all, but not less than all, of the Series D preferred stock for cash, at a price per share of Series D preferred stock equal to 125% of the stated value. The Series D preferred stock has no voting rights.

In July 2022, the Company issued 1,058 shares of Series D preferred stock for approximately \$1.1 million, which was included on the consolidated balance sheet in shares liability as of June 30, 2022, as the proceeds were received by the Company in June 2022, prior to issuance of the shares. As of December 31, 2022, 1,058 shares of Series D preferred stock are issued and outstanding.

In connection with the issuance of the 1,058 shares of Series D preferred stock, the Company issued 814,102 equity-classified warrants to purchase shares of the Company's common stock with an exercise price of \$1.30 per share. The proceeds from the Series D preferred stock were allocated between the warrants and the Series D preferred stock based on their relative fair values.

The Company entered into a Registration Rights Agreement ("RRA") with the holders of the Series D preferred stock, whereby the Company was to use its best efforts to file a registration statement registering the resale of the shares of common stock issuable upon conversion of the Series D preferred stock and upon exercise of the warrants within thirty (30) calendar days following the closing of the Series D preferred stock offering. The Company was to use its best efforts to have the registration statement declared "effective" within ninety (90) calendar days from closing, or one hundred and twenty (120) from closing in the event the registration statement is reviewed by the SEC. If the Company fails to meet these requirements, the RRA states that the Company shall pay to each holder an amount in cash, as partial liquidated damages and not as a penalty, equal to the product of 1.0% multiplied by the aggregate subscription amount paid by such holder pursuant to the purchase agreement, up to an aggregate of 10% of the aggregate subscription amount paid by such holder pursuant to the purchase agreement for all such liquidated damages.

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Using the guidance provided by ASC 825-20 Financial Instruments, the Company determined that the RRA should be accounted for as a separate unit of account from the Series D preferred stock. Accordingly, under ASC 825-20, a financial instrument that is both within the scope of ASC 825-20 and subject to a registration payment arrangement shall be recognized and measured in accordance with ASC 825-20 without regard to the contingent obligation to transfer consideration pursuant to the registration payment arrangement.

The RRA called for the Company to file a registration statement by August 25, 2022 and declare it effective within 90 days of July 26, 2022. The Company filed its registration statement on November 17, 2022, and the holders of the Series D preferred stock waived the related registration rights penalty of approximately \$2,400.

The Series D preferred stock and warrants sold were not registered under the Securities Act of 1933, as amended (the “Securities Act”) or the securities laws of any state and were offered and sold in reliance on the exemption from registration afforded by Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving any public offering. The holders of Series D preferred stock are “accredited investors” as such term is defined in Regulation D promulgated under the Securities Act.

Common Stock

Public Offering

On July 19, 2022, the Company entered into an underwriting agreement relating to the Company’s public offering of its common stock, par value \$0.0001 per share. The Company agreed to sell 1,250,000 shares of its common stock to the underwriters, at a purchase price per share of \$0.744 (the offering price to the public of \$0.80 per share minus the underwriters’ discount), pursuant to the Company’s registration statement on Form S-3 (File No. 333-262122), under the Securities Act of 1933, as amended. The Company has also granted to the underwriters a 30-day option to purchase up to 187,500 additional shares of common stock to cover over-allotments. On July 22, 2022, the Company received net proceeds of \$855,000, net of underwriter fees and commissions of approximately \$70,000, and offering costs of \$75,000.

In connection with the Company’s public offering, the Company issued a warrant to the underwriters to purchase 62,500 shares of its common stock. The warrant may be exercised beginning on the date that is 180 days after July 22, 2022 until July 19, 2027. The exercise price of the warrant is \$0.80 per share.

ATM Offering

As of December 31, 2022, the Company has received net proceeds on sales of 3,368,146 shares of common stock under its ATM Offering (See Note 2) of approximately \$1.25 million (after deducting \$0.05 million in commissions and expenses) at a weighted average price of \$0.385 per share.

Stock Issued for Services

During the year ended December 31, 2021, the Company issued 64,261 shares of its common stock with a fair value of approximately \$0.2 million in exchange for consulting services.

Stock Options

During the nine months ended December 31, 2021, the Company issued 409,385 shares of its common stock in connection with the exercise of stock options and received proceeds of approximately \$0.2 million.

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Note 11 – Stock-Based Compensation, Restricted Stock and Stock Options

On December 22, 2022, the Company adopted its 2022 Long-Term Incentive Plan (the “2022 Plan”). Under the 2022 Plan, there are 4,200,000 shares of the Company’s common stock available for issuance and the 2022 Plan has a termination date of October 31, 2032.

The available shares in the 2022 Plan will automatically increase on the first trading day in January of each calendar year during the term of 2022 Plan, commencing with January 2023, by such number of shares of common stock as are necessary so that the total number of shares reserved for issuance under the 2022 Plan shall be equal to 19.9% of the total number of outstanding shares of common stock, determined on a fully diluted basis as of the applicable trading date (the “Stipulated Percentage”); (b) our Board of Directors may act prior to January 1st of a given calendar year to provide that (i) there will be no such automatic annual increase in the number of shares reserved for issuance under the 2022 Plan or (ii) the increase in the number of shares for such calendar year will be a lesser number of shares than necessary to maintain the Stipulated Percentage of shares reserved for issuance under the 2022 Plan; and (c) unless an increase in shares reserved for issuance under the 2022 Plan in excess of the Initial Share Limit has been approved by our shareholders, the maximum number of shares of common stock that may be delivered pursuant to incentive stock options shall not exceed the Initial Share Limit or, if greater, the number of shares of common stock subsequently approved by the requisite vote of our shareholders entitled to vote thereon.

On December 16, 2020, the Company adopted its 2020 Long-Term Incentive Plan (the “2020 Plan”). Under the 2020 Plan, there are 5,333,333 shares of the Company’s common stock available for issuance and the 2020 Plan has a term of 10 years. The available shares in the 2020 Plan will automatically increase on the first trading day in January of each calendar year during the term of this Plan, commencing with January 2021, by an amount equal to the lesser of (i) five percent (5%) of the total number of shares of common stock issued and outstanding on December 31 of the immediately preceding calendar year, (ii) 1,000,000 shares of common stock or (iii) such number of shares of common stock as may be established by the Company’s Board of Directors.

The Company grants equity-based compensation under its 2020 Plan and its 2016 Equity Incentive Plan (the “2016 Plan”). The 2020 Plan and 2016 Plan allows the Company to grant incentive and nonqualified stock options, and shares of restricted stock to its employees, directors and consultants. On June 14, 2019, the Board of Directors of the Company approved increasing the number of shares allocated to the Company’s 2016 Equity Incentive Plan from 5,500,000 to 7,333,333.

Under the 2016 Plan and the 2020 Plan, upon the exercise of stock options and issuance of fully vested restricted common stock, shares of common stock may be withheld to satisfy tax withholdings. The Company intends to net settle certain employee options to ensure adequate authorized shares under the Incentive Plan.

Stock-based compensation:

The Company recognized total expenses for stock-based compensation during the year ended December 31, 2022 and the nine months ended December 31, 2021, which are included in the accompanying statements of operations, as follows (in thousands):

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Research and development expenses	\$ 508	\$ 384
Selling, general and administrative expenses	1,897	8,318
Total stock-based compensation	<u>\$ 2,405</u>	<u>\$ 8,702</u>

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Restricted stock units:

A summary of the Company's restricted stock activity during the year ended December 31, 2022 is as follows:

	Number of Shares	Weighted Average Grant-Date Fair Value
Unvested at December 31, 2021	1,939,683	\$ 3.40
Granted	676,350	\$ 1.37
Vested	(892,016)	\$ 2.09
Issued	(1,095,237)	\$ 4.50
Unvested at December 31, 2022	<u>628,780</u>	<u>\$ 2.30</u>

During the year ended December 31, 2022, the Company granted 676,350 restricted stock units ("RSUs") to employees and members of its board of directors with a fair value of approximately \$0.9 million. Included in the RSUs granted during 2022, 33,332 RSUs were exchanged for 33,332 cancelled stock options. The cancellation of the stock options and the issuance of the RSUs was accounted for as a modification of the equity awards, and during the year ended December 31, 2022, the Company recognized incremental stock-based compensation of \$0.1 million.

During the year ended December 31, 2022, the Company accelerated the vesting of 423,779 RSUs. The accelerated vesting was accounted for as a modification of the equity awards, and during the year ended December 31, 2022 the Company reversed \$0.4 million of stock-based compensation related to the incremental fair value of the awards.

During the nine months ended December 31, 2021, the Company granted 800,000 restricted stock units with a fair value of approximately \$4.1 million, in exchange for 800,000 restricted stock awards issued to an officer of the Company and a consultant. The fair value and vesting terms of the restricted stock units are identical to the terms of the restricted stock awards, and therefore, no incremental stock-based compensation has been recognized during the nine months ended December 31, 2021.

During the nine months ended December 31, 2021, the Company granted 400,000 restricted stock units with a fair value of approximately \$1.6 million to its Chief Financial Officer.

During the year ended December 31, 2022, the Company recognized stock-based compensation of approximately \$1.6 million, related to restricted stock. As of December 31, 2022, unrecognized stock-based compensation totaled approximately \$0.3 million, which is expected to be recognized over a weighted-average period of one year.

Restricted stock awards:

During the nine months ended December 31, 2021, 66,666 shares of the Company's restricted stock awards vested. During the nine months ended December 31, 2021, the Company exchanged 88,888 shares of its vested restricted stock awards and 711,112 of its unvested restricted stock awards for restricted stock units. (See Restricted stock units).

Stock Options:

The Company provides stock-based compensation to employees, directors and consultants under both the 2016 and 2020 Plans. The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The risk-free interest rate is determined by referencing the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

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During the year ended December 31, 2022, the Company granted 832,500 options to purchase shares of the Company's common stock to members of the Company's Board of Directors, employees and consultants. The options have a fair value of approximately \$0.3 million. During the nine months ended December 31, 2021, the Company granted 1,442,204 stock options with a fair value of approximately \$5.1 million. The following was used in determining the fair value of stock options granted during the year ended December 31, 2022 and the nine months ended December 31, 2021.

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Dividend yield	0%	0%
Expected price volatility	88.8% - 91.7%	50% - 103%
Risk free interest rate	3.96% - 3.25%	0.35% - 1.33%
Expected term	5.0 - 7.0 years	3-7 years

A summary of activity under the 2016 and 2020 Plans for the year ended December 31, 2022 is as follows:

	Shares Underlying Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	11,135,432	\$ 2.85	7.6	\$ 13,031
Granted	832,500	\$ 0.40	-	
Canceled	(977,638)	\$ 3.20	-	
Forfeited	(1,476,670)	\$ 2.60	-	
Outstanding at December 31, 2022	<u>9,513,624</u>	<u>\$ 2.64</u>	<u>6.5</u>	<u>\$ 26,188</u>
Exercisable at December 31, 2022	<u>8,579,370</u>	<u>\$ 2.80</u>	<u>6.3</u>	<u>\$ 26,188</u>

During the year ended December 31, 2022, the Company cancelled 977,638 stock options with a weighted average exercise price of \$3.20 per share. Of these stock option cancellations, 33,332 were related to an exchange for restricted stock units (see restricted stock units above) and 944,306 stock options were canceled in connection with employee departures.

During the year ended December 31, 2022 the Company modified the expiration dates of 789,527 vested stock options related to terminated employees. The modification of the equity awards modified the expiration date based on the options original terms. During the year ended December 31, 2022, the Company recognized incremental stock-based compensation of \$0.6 million.

During the nine months ended December 31, 2021, the Company granted 1,318,147 options to purchase shares of its common stock with a fair value of approximately \$2.4 million to the Company's Board of Directors, executives and employees. The options vest over a period of one month - 2 years.

During the nine months ended December 31, 2021, the Company granted 124,057 options to purchase shares of its common stock with a fair value of approximately \$0.2 million for consulting services.

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During the year ended December 31, 2022, the Company recognized stock-based compensation of approximately \$0.8 million, related to stock options. As of December 31, 2022, unrecognized stock-based compensation totaled approximately \$0.3 million, which is expected to be recognized over a weighted-average period of four months.

Warrants:

A summary of the Company’s warrant (excluding penny warrants) activity during the years ended December 31, 2022 is as follows:

	Shares Underlying Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	4,525,177	\$ 2.65	4.0	\$ 7,088
Issued	23,136,004	\$ 0.38		
Outstanding and Exercisable at December 31, 2022	27,661,181	\$ 0.75	4.5	\$ -

2022 Liability Classified Warrants

October 2022 Financing

On October 19, 2022, the Company issued 21,759,402 warrants in connection with the issuance of its Notes (See Note 5 and Note 9). The warrants have an exercise price of \$0.32 per share and expire five years from the issuance date.

2022 Equity Classified Warrants

Hudson Pacific Properties, L.P.

On August 12, 2022, the Company entered into two Purchase Orders (PO’s) with Hudson Pacific Properties, L.P. (“Hudson”) for the purchase of the Company’s Smart Window Inserts™ (“Inserts”). Hudson is a unique provider of end-to-end real estate solutions for tech and media tenants. The PO’s have a value of \$85,450 and represent the first orders the Company has received prior to the launch of its Inserts. Delivery and installation are expected to begin in Q2 2023.

On August 12, 2022, as additional consideration for the PO’s, the Company issued a warrant to Hudson to purchase 300,000 shares of the Company’s common stock at \$0.75 per share. The warrant has a five-year life and expires on August 12, 2027.

Because Hudson is a customer, the Company accounts for the PO’s and warrants under Accounting Standards Codification (“ASC”) 606 *Revenue Recognition* (“ASC 606”). As the performance obligations have not yet been satisfied, the Company has not recognized any revenue during the year ended December 31, 2022.

The Company accounts for the equity-classified warrant as consideration payable to a customer under ASC 606, as it relates to the future purchase of the Inserts. Pursuant to ASC 718 *Compensation - Stock Compensation* (“ASC 718”), the Company measured the fair value of the warrant using the Black-Scholes valuation model on the issuance date, with the value being recognized as a prepaid asset up to the recoverable value represented by the value of the contract. The fair value of the warrant on the issuance date totaled \$161,700, and as of December 31, 2022, the Company recorded a prepaid asset of \$85,450, representing the recoverable value from the PO’s, which is included in prepaid and other current assets on the accompanying consolidated balance sheet.

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SLOC

In connection with the SLOC, the Company issued a warrant for 200,000 shares of common stock with an exercise price of \$2.00, and a total fair value of approximately \$223,000. This amount is included in the accompanying consolidated balance sheet as deferred debt issuance costs. During the year ended December 31, 2022 the Company amortized approximately \$73,000 of the warrants fair value, which is included in other expense on the accompanying consolidated statement of operations. As of December 31, 2022, deferred debt issuance costs totaled \$150,000.

2021 Equity Classified Warrants

During the nine months ended December 31, 2021, the Company issued 775,724 common stock warrants in exchange for consulting and advisory services. The warrants have a fair value of approximately \$1.3 million which is recorded as stock-based compensation in the accompanying statement of operations for the nine months ended December 31, 2021.

The Company estimated the fair value of its equity classified warrants using the Black-Scholes pricing model during the year ended December 31, 2022 and the nine months ended December 31, 2021 as follows:

	Year Ended December 31, 2022	Nine Months Ended December 31, 2021
Dividend yield	0%	0%
Expected price volatility	87.3%-103.0%	50%-103%
Risk free interest rate	2.2%-3.0%	0.81%-1.2%
Expected term (years)	5.0	5.0

Note 12 – Income Taxes

During the years ended December 31, 2022 and the nine months ended December 31, 2021, the Company did not record a provision for income taxes due to the recognition of a full valuation allowance.

As of December 31, 2022, the Company has net operating loss carryforwards of approximately \$34.2 million and \$24.2 million available to reduce future taxable income, for federal and state income tax purposes, respectively. Under the Tax Cuts and Jobs Act, the Federal NOLs of approximately \$34.2 million incurred during the years ended after December 31, 2017 can be carried forward indefinitely, but are limited in utilization to 80% of taxable income each year. Approximately \$26,000 of the federal NOL will expire in 2037. The state net operating loss carryforwards will begin to expire in 2037.

Under the Internal Revenue Code (“IRC”) Section 382, annual use of the Company’s net operating loss carryforwards to offset taxable income may be limited based on cumulative changes in ownership. The Company has not completed an analysis to determine whether any such limitations have been triggered as of December 31, 2022. The Company has no income tax effect due to the recognition of a full valuation allowance on the expected tax benefits of future loss carry forwards based on uncertainty surrounding realization of such assets.

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The federal and state tax returns beginning with the year ended December 31, 2019 are currently open for examination under the applicable federal and state income tax statutes of limitations.

The tax effects of the temporary differences and carry forwards that give rise to deferred tax assets consist of the following (in thousands):

	December 31, 2022	December 31, 2021
Net operating loss carryforwards	\$ 8,438	\$ 7,229
Equity based compensation	923	986
Amortization	25	6
Lease liability	409	-
Capitalized research costs	707	-
Accruals and other temporary differences	78	2
Gross Deferred Tax Assets	<u>10,580</u>	<u>8,223</u>
Depreciation	(46)	(46)
Right of use asset	(388)	-
Accruals and other temporary differences	-	-
Less Valuation Allowance	(10,146)	(8,177)
Net Deferred Taxes	<u>\$ -</u>	<u>\$ -</u>

A reconciliation of the statutory income tax rates and the Company's effective tax rate is as follows:

	Year ended December 31, 2022	Nine months ended December 31, 2021
Tax provision at statutory rate	21.0%	21.0%
State taxes, net of federal benefit	0.1%	-%
Permanent items	(0.2)%	0.6%
Stock-based compensation	(4.0)%	(6.3)%
Change in fair value of warrant liability	1.5%	-%
Deferred tax true-up / return to provision	(4.6)%	8.7%
Tax reform rate change	-%	(0.8)%
Change in valuation allowance	(13.8)%	(23.2)%
Income taxes provision (benefit)	<u>-%</u>	<u>-%</u>

As of December 31, 2022 and 2021, the Company had no uncertain tax positions. The Company's policy is to recognize interest and penalties that would be assessed in relation to the settlement value of unrecognized tax benefits as a component of income tax expense. The Company did not accrue either interest or penalties for the years ended December 31, 2022 and 2021.

The Company has not been under tax examination in any jurisdiction for the years ended December 31, 2022 and 2021.

Note 13 – Commitments and Contingencies

Leases

Oregon State University

On March 8, 2016, the Company entered into a lease agreement with Oregon State University, to lease office and laboratory space located at HP Campus Building 11, 1110 NE Circle Blvd, Corvallis, Oregon, for approximately \$400 monthly. On July 1, 2016, the Company entered into the first amendment to the lease agreement which increased the monthly lease expense to approximately \$1,200. On October 1, 2017, the Company entered into a sublease agreement, which provides for additional office space and the monthly lease payment increased to approximately \$1,800. The lease expired on June 30, 2018 and the Company extended the lease through June 30, 2019. The monthly lease payment increased to approximately \$4,500 for the months ended June 30 2018 through November 30, 2018, and increased to approximately \$7,550 for the months ended December 31, 2018 through June 30, 2019.

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On September 1, 2021, the Company entered into the seventh amendment to its lease with Oregon State University which expands the lease to now include approximately 703 square feet of lab space, 576 square feet of cubicle space, 1096 square feet of Highbay lab space, and 376 square feet of High bay storage space in a building commonly known as Building 11. Effective September 1, 2021, the quarterly operating expense will be \$31,647 covering all utility and facility tooling costs. The sublease is extended until June 30, 2025.

On January 24, 2022, the Company entered into the eighth amendment to its lease with Oregon State University which expands the lease to now include approximately 703 square feet of lab space, 768 square feet of cubicle space, 2,088 square feet of Highbay lab space, and 376 square feet of High bay storage space in a building commonly known as Building 11. Effective January 24, 2022, the quarterly operating expense will be \$44,252 covering all utility and facility tooling costs. The sublease expires June 30, 2025.

On January 20, 2023, the Company entered into the ninth amendment to its lease with Oregon State University which reduces the amount of cubicle space from 768 square feet to 288 square feet. Effective January 20, 2023 the quarterly operating expense will be \$41,323 covering all utility and facility tooling costs.

Hudson 11601 Wilshire, LLC

On March 4, 2021, the Company entered into a lease agreement with Hudson 11601 Wilshire, LLC, to lease 3,500 square feet of office space located in Los Angeles, California. The lease term is 39 months and expires on June 30, 2024. The monthly lease expense is as follows:

- Months 1-12 - \$18,375
- Months 13-24 - \$19,018
- Months 25-36 - \$19,683
- Months 37-39 - \$20,372

The Company paid a security deposit totaling \$20,373 at the lease inception date.

HP Inc.

On May 4, 2021, the Company entered into a lease agreement with HP Inc. to lease office and lab space located in Corvallis, Oregon. The lease term is 5 years and the lease commencement date is April 1, 2021. The monthly lease expense is \$7,388 and increases 3% on each anniversary of the lease commencement date. The Company will pay a security deposit totaling \$8,315. The Company has the option to extend the lease for an additional 5 years. On January 26, 2022, the Company entered into the first amendment to its lease with HP Inc., which amends the lease commencement date to January 26, 2022 and the lease expiration date to January 31, 2027.

Pacific N.W. Properties, LLC

On October 5, 2021, the Company entered into a lease agreement with Pacific N.W. Properties, LLC to lease 26,963 square feet of warehouse, manufacturing, production and office space located in Salem Oregon. The commencement date of the lease is October 1, 2021, the lease term is 62 months and expires on November 30, 2026.

On December 9, 2021, the Company entered into the first amendment to its lease agreement with Pacific N.W. Properties, LLC. The lease amendment revises the lease commencement date to December 9, 2021 and the lease expiration date to February 28, 2027. The revised monthly lease expense is as follows:

- Months 1-2 - \$15,357
- Months 3-12 - \$21,500
- Months 13-24 - \$22,145
- Months 25-36 - \$22,809
- Months 37-48 - \$23,494
- Months 49-60 - \$24,198
- Months 61-62 - \$24,924

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As of December 31, 2022, the Company had operating lease liabilities of approximately \$1.9 million and right-of-use assets of approximately \$1.8 million, which are included in the consolidated balance sheet.

The components of lease expense were as follows (in thousands):

	Year Ended December 31, 2022
Operating leases:	
Operating lease cost	\$ 760
Variable lease cost	50
Operating lease expense	\$ 810

Supplemental cash flow information related to leases were as follows:

	Year Ended December 31, 2022
Operating cash flows - operating leases	\$ 719
Right-of-use assets obtained in exchange for operating lease liabilities	\$ 2,336
Weighted-average remaining lease term – operating leases (in years)	3.3
Weighted-average discount rate – operating leases	12.0%

As of December 31, 2022, future minimum payments are as follows (in thousands):

	Operating Leases
Year ended December 31, 2023	\$ 776
Year ended December 31, 2024	678
Year ended December 31, 2025	475
Year ended December 31, 2026	390
Year ended December 31, 2027	58
Total	2,377
Less present value discount	(437)
Operating lease liabilities	\$ 1,940

During the year ended December 31, 2022 the Company recognized rent expense of approximately \$0.8 million, and during the nine months ended December 31, 2021 the Company recognized rent expense of approximately \$0.2 million.

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Litigation

From time to time, the Company is also involved in various other claims and legal actions that arise in the ordinary course of business. Although the results of litigation and claims cannot be predicted with certainty, the Company does not believe that the ultimate resolution of these actions will have a material adverse effect on its financial position, results of operations, liquidity or capital resources.

Future litigation may be necessary to defend ourselves and our partners by determining the scope, enforceability and validity of third party proprietary rights or to establish the Company's proprietary rights. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

Note 14 – Subsequent Events

The Company has evaluated all subsequent events through the date of filing, March 31, 2023, of this Annual Report on Form 10-K with the SEC, to ensure that this filing includes appropriate disclosure of events both recognized in the consolidated financial statements as of December 31, 2022, and events which occurred after December 31, 2022, but which were not recognized in the financial statements. The Company has determined that there were no subsequent events which required recognition, adjustment to or disclosure in the financial statements.

Business Combination

On January 3, 2023, the Company acquired certain assets related to the construction of 5G fiber optics infrastructure and distributed antenna systems from Amerigen 7 LLC (the "Asset Acquisition"), for cash consideration of approximately \$0.65 million. The Asset Acquisition included approximately 12 employees, customer contracts, and certain operating liabilities. The Asset Acquisition will be accounted for as a business combination in accordance with Accounting Standards Codification 805, Business Combinations. The initial purchase price may be adjusted as needed per the terms of the arrangement agreement. The allocation of purchase price, including any fair value the assets acquired and liabilities assumed as of the acquisition date has not been completed.

Notes Payable

On January 19, 2023, the Company entered into a warrant inducement agreement with certain holders of the Notes, and issued 6.4 million warrants, with a fair value of \$2.05 million, to purchase shares of the Company's common stock.

On February 28, 2023, the Company entered into waiver agreements with the investors of the Notes issued in October 2022, which extended the maturity date of the Notes from October 18, 2023 until April 18, 2024. In connection with the waiver agreements, the Company issued 5,813,414 warrants to purchase shares of the Company's common stock, which are exercisable at \$0.32 per share and expire five years from the issuance date.

On January 3, 2023, the Company issued senior secured notes (the "2023 Notes") with a principal balance of approximately \$1.2 million and warrants to purchase 2,500,000 shares of the Company's common stock for net proceeds of \$0.8 million. The 2023 Notes were issued with an original issue discount of 20%, do not bear interest, and mature three months from the date of issuance (unless extended pursuant to the terms of the 2023 Notes). The warrants are exercisable for five years at an exercise price of \$0.322, subject to adjustment under certain circumstances described in the warrants.

2023 Line of Credit

On February 2, 2023, the Company entered into a line of credit (the "Line of Credit") securing a line of credit up to \$100.0 million. The Line of Credit will be used to fund expenses related to the fulfillment of contracts with customers of the Company's wholly-owned subsidiary, Crown Fiber Optics Corporation (See Note 1). The Line of Credit expires February 2, 2024, unless the Line of Credit is extended for one or two additional years in accordance with its terms. On February 2, 2023, the Company withdrew \$2.0 million under the Line of Credit.

CROWN ELECTROKINETICS, CORP.
Notes to Consolidated Financial Statements
Year Ended December 31, 2022 and Nine Months Ended December 31, 2021

Upon drawing down on the Line of Credit, the Company will issue a Secured Promissory Note (“the Promissory Note”) which is due and payable 60 days from the issuance date. The Promissory Note is non-interest bearing and secured by the Company’s assets. The Promissory Note issued with the initial \$2.0 million draw down is convertible into shares of the Company’s common stock, at a conversion price per share of \$0.50 per share, subject to adjustment under certain circumstances described in the Promissory Note. Promissory Notes evidencing future withdrawals, if any, will be convertible into common stock only upon the declaration of an event of default under such Promissory Note.

As consideration for entering into the Line of Credit, the Company issued 5,000 shares of Series E preferred stock, and issued a warrant to purchase 45,000 shares of the Company’s Series E preferred stock. Additionally, 5,000 shares of Series E preferred stock will be issued on the first and second anniversary of the effective date of the Line of Credit. However, if the Company does not elect to extend the Line of Credit for an additional one or two years, the additional 5,000 shares of Series E preferred stock will be issued immediately.

The warrant to purchase 45,000 shares of the Company’s Series E preferred stock is exercisable for five years at an exercise price of the greater of \$0.50 per share multiplied by 1,000, and subject to adjustment under certain circumstances described in the warrant.

Common Stock

Subsequent to December 31, 2022, in connection with its ATM Offering, the Company received net proceeds on sales of 12,700,100 shares of its common stock of approximately \$2.11 million (after deducting \$0.09 million in commissions and expenses) at a weighted average price of \$0.189 per share.

Subsequent to December 31, 2022, the Company issued 6,405,844 shares of its common stock in connection with the exercise of 6,405,844 warrants, receiving net proceeds of approximately \$2.06 million at a weighted average price of \$0.32 per share.

Preferred Stock

Subsequent to December 31, 2022, the Company filed the first amendment to its Series D preferred stock, which modifies the conversion price of the Series D preferred stock from \$1.30 to \$0.50 per share.

On February 1, 2023, the Company’s Board of Directors authorized 77,000 shares of Series E preferred stock with a par value of \$0.0001 per share, in connection with its 2023 Line of Credit. Each share of Series E Preferred Stock is convertible into 1,000 shares of the Company’s common stock at the option of the holders. The holders of the Series E preferred stock shall receive dividends on an as converted basis together with the holders of the Company’s common stock. The Series E preferred stock has no voting rights and does not have a preference upon any liquidation, dissolution or winding-up of the Company.

Holders of Series E preferred stock are prohibited from converting shares of Series E preferred stock into shares of common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (to be initially set at 4.99% and thereafter adjusted by the holder to a number between 4.99% and 9.99%) of the total number of shares of common stock issued and outstanding immediately after giving effect to such conversion. In addition, in the event a conversion of Series E preferred stock would result in the holder owning more than 19.99% of the Company’s outstanding shares of common stock, the number of shares of common stock that may be issued upon such conversion of Series E preferred stock, shall be limited to 19.99% of the Company’s outstanding shares of common stock on that date, unless stockholder approval is obtained by the Company to issue a number of shares of common stock exceeding the limit.

Common Stock

On December 22, 2022, the Company’s stockholders approved a reverse stock split of its common stock at a ratio of not more than 1-for-15, such ratio to be determined by the Company’s Board of Directors on or prior to December 22, 2023.

SUBSIDIAIRES OF CROWN ELECTROKINETICS CORP.

Name	Place of Incorporation
Crown Fiber Optics Corp.	Delaware

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER OF CROWN ELECTROKINETICS CORP.
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Doug Croxall, certify that:

1. I have reviewed this Annual Report on Form 10-K of Crown Electrokinetics Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2023

/s/ Doug Croxall

Doug Croxall
Chief Executive Officer
(principal executive officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER OF CROWN ELECTROKINETICS CORP.
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Joel Krutz, certify that:

1. I have reviewed this Annual Report on Form 10-K of Crown Electrokinetics Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2023

/s/ Joel Krutz

Joel Krutz
Chief Financial Officer
(principal financial officer and
principle accounting officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned, Doug Croxall, hereby certifies, in his capacity as Chief Executive Officer of Crown Electrokinetics Corp. (the "Company"), for the purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) The Annual Report of the Company on Form 10-K for the year ended December 31, 2022 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 31, 2023

/s/ Doug Croxall

Doug Croxall

Chief Executive Officer

(principal executive officer)

A signed original of this written statement required by Section 906 has been provided to Crown Electrokinetics Corp. and will be retained by Crown Electrokinetics Corp. and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned, Joel Krutz, hereby certifies, in his capacity as Chief Financial Officer of Crown Electrokinetics Corp. (the "Company"), for the purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) The Annual Report of the Company on Form 10-K for the year ended December 31, 2022 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 31, 2023

/s/ Joel Krutz

Joel Krutz
Chief Financial Officer
(principal financial officer and
principle accounting officer)

A signed original of this written statement required by Section 906 has been provided to Crown Electrokinetics Corp. and will be retained by Crown Electrokinetics Corp. and furnished to the Securities and Exchange Commission or its staff upon request.
