

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

FORM S-3

REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

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 Number)

1110 NE Circle Blvd., Corvallis, Oregon 97330

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Doug Croxall
Chief Executive Officer
1110 NE Circle Blvd.
Corvallis, Oregon 97330
(458)-212-2500

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

M. Ali Panjwani
Pryor Cashman LLP
7 Times Square
New York, New York 10036
(212) 326-0820

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting 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 Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

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 7(a)(2)(B) of Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This registration statement is a replacement registration statement being filed pursuant to Rule 415(a)(6) under the Securities Act of 1933, as amended (the "Securities Act"), with respect to securities that remain unsold under the Registration Statement on Form S-3 (File No. 333-262122), originally filed on January 12, 2022, and declared effective on January 21, 2022, which is due to expire on January 21, 2025 (the "Prior Registration Statement"). Pursuant to Rule 415(a)(5)(ii) under the Securities Act, by filing this registration statement on Form S-3 (the "Registration Statement"), the Registrant may issue and sell securities covered by the Prior Registration Statement until the earlier of (i) the effective date of this Registration Statement and (ii) July 20, 2025, which is 180 days after the third-year anniversary of the effective date of the Prior Registration Statement

(the “Expiration Date”). In particular, the Registrant may continue to offer and sell under the Prior Registration Statement shares of common stock in its at-the-market offering through A.G.P./Alliance Global Partners, as sales agent, which offering shall remain registered under the Prior Registration Statement using a prospectus supplement filed on March 30, 2022, as most recently supplemented on October 15, 2024, until the Expiration Date. Pursuant to Rule 415(a)(6) under the Securities Act, the offering of securities under the Prior Registration Statement will be deemed terminated as of the effective date of this registration statement.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 14, 2025

Prospectus

Crown Electrokinetics Corp.

\$500,000,000

**Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Units**

We may offer from time to time shares of our common stock, preferred stock, senior debt securities, subordinated debt securities, warrants, rights and units of Crown Electrokinetics Corp. in any combination from time to time in one or more offerings, at prices and on terms described in one or more supplements to this prospectus. The securities offered by this prospectus will have an aggregate offering price of up to \$500,000,000. The preferred stock, debt securities, warrants and units may be convertible into or exercisable or exchangeable for our common stock or other securities. This prospectus provides you with a general description of the securities we may offer.

Each time we sell securities hereunder, we will attach a supplement to this prospectus that contains specific information about the terms of the offering, including the price at which we are offering the securities to the public. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update, or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement, and any related free writing prospectus, as well as any documents incorporated by reference, before buying any of the securities being offered.

The securities hereunder may be offered directly by us, through agents designated from time to time by us or to or through underwriters or dealers. If any agents, dealers or underwriters are involved in the sale of any securities, their names, and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the section entitled “*About This Prospectus*” for more information.

Our common stock is listed on the Nasdaq Capital Market (“Nasdaq”) under the symbol “CRKN.”

The securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section entitled “*Plan of Distribution*” in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Investing in securities involves certain risks. See “*Risk Factors*” beginning on page 17 of this prospectus and in the applicable prospectus supplement, as updated in our future filings made with the Securities and Exchange Commission that are incorporated by reference into this prospectus. You should carefully read and consider these risk factors before you invest in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2025

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The distribution of this prospectus may be restricted by law in certain jurisdictions. You should inform yourself about and observe any of these restrictions. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this document are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this prospectus does not extend to you.

We have not authorized anyone to give any information or make any representation about us that is different from, or in addition to, that contained in this prospectus, including in any of the materials that we have incorporated by reference into this prospectus, any accompanying prospectus supplement, and any free writing prospectus prepared or authorized by us. Therefore, if anyone does give you information of this sort, you should not rely on it as authorized by us. You should rely only on the information contained or incorporated by reference in this prospectus and any accompanying prospectus supplement.

You should not assume that the information contained in this prospectus and any accompanying supplement to this prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying supplement to this prospectus is delivered or securities are sold on a later date. Neither the delivery of this prospectus, nor any sale made hereunder, shall under any circumstances create any implication that there has been no change in our affairs since the date hereof or that the information incorporated by reference herein is correct as of any time subsequent to the date of such information.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 we filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process. Under this shelf registration process, we and/or any selling stockholder to be named in a prospectus supplement to this prospectus may, from time to time, offer and sell shares of our common stock; and we may, from time to time, offer and sell any combination of the securities described in this prospectus in one or more offerings.

This prospectus provides certain general information about the securities that we and/or a may offer hereunder. Each time we and/or any selling stockholder sell securities, we will provide a prospectus supplement that will contain specific information about the terms of the offering and the offered securities. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. In each prospectus supplement, we will include the following information:

- the number and type of securities that we propose to sell;
- the public offering price;
- the names of any underwriters, agents or dealers through or to which the securities will be sold;
- any compensation of those underwriters, agents or dealers;
- any additional risk factors applicable to the securities or our business and operations; and
- any other material information about the offering and sale of the securities.

In addition, the prospectus supplement or free writing prospectus may also add, update or change the information contained in this prospectus or in documents incorporated by reference in this prospectus. The prospectus supplement or free writing prospectus will supersede this prospectus to the extent it contains information that is different from, or that conflicts with, the information contained in this prospectus or incorporated by reference in this prospectus. You should read and consider all information contained in this prospectus, any accompanying prospectus supplement and any free writing prospectus that we have authorized for use in connection with a specific offering, in making your investment decision. **You should also read and consider the information contained in the documents identified under the heading “Incorporation of Certain Documents by Reference” and “Where You Can Find More Information” in this prospectus.**

Unless the context otherwise requires, the terms “the Company,” “Crown,” “we,” “us,” and “our” in this prospectus each refer to Crown Electrokinetics Corp.

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FORWARD-LOOKING STATEMENTS

This prospectus contains various forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which represent our expectations or beliefs concerning future events. Forward-looking statements include statements that are predictive in nature, which depend upon or refer to future events or conditions, and/or which include words such as “believes,” “plans,” “intends,” “anticipates,” “estimates,” “expects,” “may,” “will,” “continues,” “should” or the negative of these words and phrases or similar words or phrases which are predictions of or indicate future events or trends and which do not relate solely to historical matters. In addition, any statements concerning future financial performance, ongoing strategies or prospects, and possible future actions, including any potential strategic transaction involving us, which may be provided by our management, are also forward-looking statements. These statements are not guarantees of future performance, and we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law.

Forward-looking statements are based on current expectations and projections about future events, actual events and results may differ materially from those expressed or forecasted in forward-looking statements due to a number of factors. You should understand that the following important factors, in addition to those discussed in under the heading “*Risk Factors*” included elsewhere in this prospectus and in any of our filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, could affect our stock price or future results and could cause those results to differ materially from those expressed in such forward-looking statements:

- our prospects, including our future business, revenues, expenses, net income, earnings per share, gross margins, profitability, cash flows, cash position, liquidity, financial condition and results of operations, backlog of orders and revenue, our targeted growth rate, our goals for future revenues and earnings, and our expectations about realizing the revenues in our backlog and in our sales pipeline;

- the effects on our business, financial condition and results of operations of current and future economic, business, market and regulatory conditions, including the current economic and market conditions and their effects on our customers and their capital spending and ability to finance purchases of our products, services, technologies and systems;
- the effects of fluctuations in sales on our business, revenues, expenses, net income, earnings per share, margins, profitability, cash flows, capital expenditures, liquidity, financial condition and results of operations;
- our products, services, technologies and systems, including their quality and performance in absolute terms and as compared to competitive alternatives, their benefits to our customers and their ability to meet our customers' requirements, and our ability to successfully develop and market new products, services, technologies and systems;
- our markets, including our market position and our market share;
- our ability to successfully develop, operate, grow and diversify our operations and businesses;

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- our business plans, strategies, goals and objectives, and our ability to successfully achieve them;
- the sufficiency of our capital resources, including our cash and cash equivalents, funds generated from operations and other capital resources, to meet our future working capital, capital expenditure and business growth needs;
- the value of our assets and businesses, including the revenues, profits and cash flows they are capable of delivering in the future;
- the effects on our business operations, financial results, and prospects of business acquisitions, combinations, sales, alliances, ventures and other similar business transactions and relationships;
- industry trends and customer preferences and the demand for our products, services, technologies and systems; and
- the nature and intensity of our competition, and our ability to successfully compete in our markets.

These statements are necessarily subjective, are based upon our current plans, intentions, objectives, goals, strategies, beliefs, projections and expectations, and involve known and unknown risks, uncertainties and other important factors that could cause our actual results, performance or achievements, or industry results, to differ materially from any future results, performance or achievements described in or implied by such statements. Actual results may differ materially from expected results described in our forward-looking statements, including with respect to correct measurement and identification of factors affecting our business or the extent of their likely impact, the accuracy and completeness of the publicly-available information with respect to the factors upon which our business strategy is based, or the success of our business.

You should read this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements.

These forward-looking statements speak only as of the date of this prospectus or, in the case of any accompanying prospectus supplement or documents incorporated by reference, the date of any such document. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statement, whether as a result of any new information, future events or otherwise.

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THE COMPANY

OVERVIEW

Crown Electrokinetics Corp. ("Crown," "we," or the "Company") is an innovative infrastructure solutions provider dedicated to benefiting communities and the environment. Comprised of three business divisions, Smart Windows, Fiber Optics, and Water Solutions, Crown is developing and delivering cutting edge solutions that are challenging the status quo and redefining industry standards.

SMART WINDOWS DIVISION

The Smart Windows division is focused on developing Crown's innovative electrokinetic (EK) technology, DynamicTint™, for application in commercial buildings to improve energy efficiency, lower carbon footprint, and increase comfort.

Electrokinetic Film Technology

Our electrokinetic (EK) film 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 opacity.

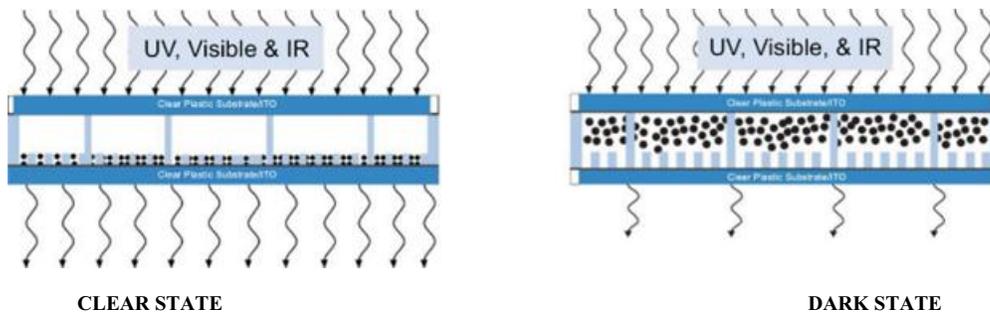


Figure 1. Schematic cross-section of electrokinetic film in clear and dark states.

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. We believe our 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.

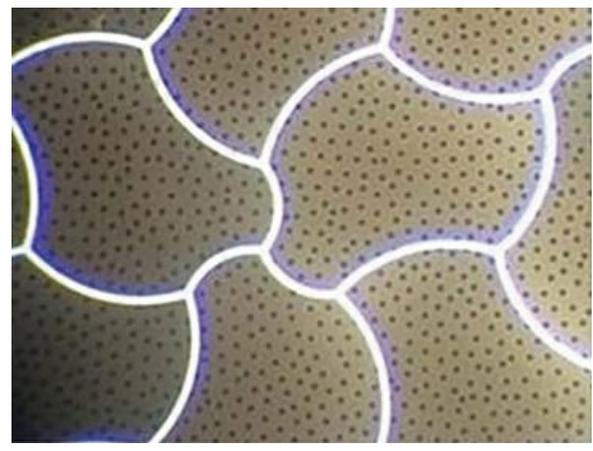


Figure 2. Microscopic Optical Image of Embossed Film

- 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 in a Smart Window Insert (“Inserts”), which can be placed within existing window frames, eliminating the needs for both window treatments or 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 firm.

Smart Window Insert powered by DynamicTint™

Our initial product, Smart Window Inserts, combines smart glass technology with the retrofit ability of window inserts. Powered by our proprietary DynamicTint™ electrokinetic film technology, these inserts seamlessly transition from clear to dark within seconds. Solar-powered and designed to retrofit existing commercial windows, they provide a cost-effective and sustainable solution for improving energy efficiency while meeting modern sustainability standards. Our planned phased rollout plan for the Smart Window Inserts will begin in 2025, targeting a select group of customers in major U.S. cities. These targeted installations will support an eventual expansion across entire building portfolios for our customers. (Figure 3).

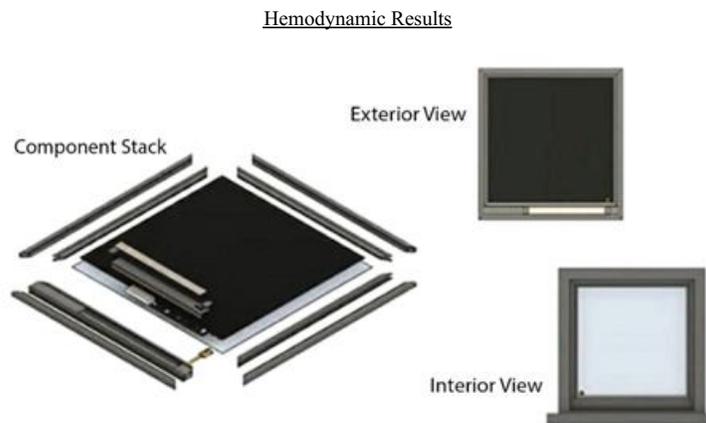


Figure 3. Smart Window Insert with EK Film

The Insert is a custom-sized panel comprised of a rigid substrate (thin glass or acrylic) 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 our Smart Window Inserts can be easily installed into commercial buildings, residential windows, skylights, 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. We believe 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

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

Our 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, we allow building owners to install our retrofit DynamicTint™ Insert into existing single pane window frames thereby creating a dual pane window;
- **Reducing energy** – Our 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** – Our Smart Window 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, we entered into a fourth amendment to the agreement with HP. 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 us by HP upon the exercise of our option to acquire the HP Patents (the “Option”). In connection with our exercise of the Option, we 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, we agreed to pay to HP a royalty fee based on the cumulative gross revenue received by us from the HP Patents as follows:

Time Window	Lifetime Cumulative Gross Revenue	Royalty Rate
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%

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

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

We believe that its EK technology is adequately protected by its patent position and by its proprietary technological know-how. However, the validity of our patents has never been contested in any litigation. We also possess know-how and relies on trade secrets and nondisclosure agreements to protect its technology. We require 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	CN11918894A	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
Europe	28-Jan-19	EP 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 2019160675	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
USA	16-Feb-18	62/631,623	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
USA	13-Jan-20	11454855	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
WO	13-Jan-20	WO 2020150166	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
USA	16-Jan-19	62/793,250	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
EPO	23-Jun-21	EP 3911998	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
CN	8-Jul-21	CN 113272708	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
Korea	5-Jul-21	KR 20210117263	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
JP	15-Jul-21	JP 7535524	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	EP 3256903*	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS
EPO	2-Dec-15	EP 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	11773647*	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
WO	2-Dec-15	WO 2016089957*	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS
WO	2-Dec-15	WO 2016089974*	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	GB 2586760	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW

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CN	2-May-19	CN 111936331	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
DE	2-May-19	DE 112019000749	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
JP	2-May-19	JP 2021526093	EVENT-BASED, AUTOMATED CONTROL OF VISUAL LIGHT TRANSMISSION THROUGH VEHICLE WINDOW
PCT	2-May-19	WO 2019215544	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	2022-0282567	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	11841613	ELECTROKINETIC DEVICE WITH IMAGING SENSOR
USA	17-Mar-23	2023-0294350	SELF-ALIGNING MASTER AREA MULTIPLICATION FOR CONTINUOUS EMBOSSING
PCT	17-Mar-23	WO 2023177905	SELF-ALIGNING MASTER AREA MULTIPLICATION FOR CONTINUOUS EMBOSSING
EP	19-Sep-24	-	SELF-ALIGNING MASTER AREA MULTIPLICATION FOR CONTINUOUS EMBOSSING
JP	17-Sep-24	-	SELF-ALIGNING MASTER AREA MULTIPLICATION FOR CONTINUOUS EMBOSSING
USA	11-Sep-22	11693289	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
USA	22-Jul-14	9441122	INKS INCLUDING SEGMENT COPOLYMER GRAFTED PIGMENTS VIA AZIDE CHEMISTRY (recently assigned to Crown)
USA	10-Feb-23	2023-0322974	REFRACTIVE INDEX MATCHED RESIN FOR ELECTROPHORETIC DISPLAYS AND OTHER APPLICATIONS
PCT	23-Feb-23	WO 2023164083	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
EP	12-Aug-24	-	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
JP	18-Oct-24	-	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
US	29-May-23	12044946	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
US	30-Aug-23	2023-0417102*	TWO PARTICLE ELECTROPHORETIC LAMINATE FOR USE WITH SMART WINDOWS WITH REDUCED DIFFRACTION
US	9-Dec-23	2024-0231187	ELECTROKINETIC DEVICE WITH IMAGING SENSOR
CN	29-May-24	CN 118567089	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM
US	21-Jul-24	-	APPLICATIONS OF AN ELECTROKINETIC DEVICE FOR AN IMAGING SYSTEM

* Co-owned with University of Cincinnati

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Hewlett-Packard Patents Assigned to Crown Electrokinetics

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

Market Opportunity

Our Smart Window division addresses a substantial market opportunity, driven by the need to improve energy efficiency, comply with regulatory mandates, and modernize aging commercial buildings. Based on a 2006 study presented to the American Council for Energy-Efficient Economy, inefficient windows account for approximately 30% of heating and cooling energy waste in commercial properties, costing approximately \$45 billion annually. At the same time, regulations like the Clean Air Act, the Energy Policy Act, and stricter state-level mandates are driving demand for technologies that lower carbon emissions. With nearly 40% of U.S. commercial buildings constructed between 1960 and 1989 (according to a survey conducted by the U.S. Energy Information Administration in 2018), many require significant upgrades to enhance tenant comfort, incorporate modern technologies, and align with sustainability goals. Our Smart Window division is uniquely positioned to address these challenges with scalable, eco-friendly solutions including the Smart Window Inserts, that improve energy performance, meet evolving regulatory standards, and modernize aging infrastructure effectively and sustainably.

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.

Our first product will be the Smart Window Insert powered by DynamicTint™ for retrofitting in commercial buildings. Our Smart Window Inserts will allow the building owner to quickly convert a single pane window unit to a dual pane window unit. Our 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.

Our 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 us. Additional applications we are exploring with potential customers of our 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 our 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. We believe that the potential retrofit market for its Smart Window Inserts is significantly large. Each unit will have wireless communication capability for control of the film and communication with the building HVAC system.

We have 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. Our DynamicTint™ Insert does not require the homeowner to replace their skylight as it conveniently fits into the existing frame. Our 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, we 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 us to supply units to retrofit windows at certain locations.

On December 27, 2021, we executed a Master Supply Agreement (the “HPP MSA”) with Hudson Pacific Properties L.P. for the installation of our 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 us to supply units to retrofit windows at certain locations.

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

In the future, we may enter into multiple specific transactions with our customers by executing purchase orders for additional buildings.

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

Leadership

The Smart Windows division is led by glass industry experts. Sheldon Davis serves as President, Smart Windows, bringing customer-focused expertise and a proven track record in commercializing ground-breaking products. His leadership is instrumental in aligning the division’s offerings with market demands and ensuring successful product adoption. Additionally, Robert Vandal serves as Chief Technology Officer, Smart Windows, bringing three decades of experience in product development, process development, and manufacturing operations, while spearheading pivotal advancements in the glass industry. Together, their combined expertise in product innovation, manufacturing, and industry leadership positions the Smart Windows division to deliver scalable, cutting-edge solutions that drive energy efficiency, sustainability, and modernization for commercial properties in the U.S.

CROWN FIBER OPTICS DIVISION

Our Fiber Optics division specializes in the design and construction of fiber optic networks connecting rural and urban communities. Crown delivers high quality fiber optics solutions by developing high-tech equipment and subcontractor expertise. These include splicing copper COAX and fiber using state of the art technologies to accommodate a wide variety of different cable specifications. We also provide construction and installation services building fiber optic networks through methods such as horizontal directional drilling, plowing, rock excavation, as well as micro-trenching. Additionally, we offer engineering and project management where we oversee projects from conceptual design to full network deployment, ensuring precision and efficiency at every stage.

On January 3, 2023, we acquired substantially all of the assets (the “Asset Acquisition”) of Amerigen 7 LLC (“Amerigen”), which was engaged in the business of construction of 5G fiber optics infrastructure, for cash consideration of approximately \$0.65 million. The Asset Acquisition included approximately 12 employees, customer contracts, and certain operating liabilities. On December 20, 2022, we incorporated our wholly-owned subsidiary Crown Fiber Optics Corp. (“Crown Fiber Optics”) in Delaware, to own and operate the business acquired from Amerigen.

We are a new entrant in providing contracting services to the fiber optics and telecommunications infrastructure industry throughout the United States. Since our entrance into the construction of fiber optic networks, we have expanded our scope and service offerings organically and through one acquisition. Today, we are focused on providing construction services to the fiber optic industry. We are focused on adding management depth to expand our industry knowledge, to develop strong customer relationships, and to hire and retain a skilled workforce.

Crown Fiber Optics supplies telecommunications providers with a comprehensive portfolio of specialty services, including program management; planning; engineering and design; aerial, and underground fiber construction.

Construction, Maintenance, and Installation Services. Crown Fiber Optics provides a range of construction, maintenance, and installation services, including the placement and splicing of fiber, copper, and coaxial cables. Crown Fiber Optics excavates trenches to place these cables; places related structures, such as poles, anchors, conduits, manholes, cabinets, and closures; places drop lines from main distribution lines to a consumer’s home or business; and maintains and removes these facilities. Crown Fiber Optics provides these services for both telephone companies, internet service providers and cable multiple system operators in connection with the deployment, expansion, or maintenance of new and existing networks. Crown Fiber Optics can also provide tower construction, lines and antenna installation, foundation and equipment pad construction, small cell site placement for wireless carriers, and equipment installation and material fabrication and site testing services. In addition, Crown Fiber Optics provides underground facility locating services for telecommunications providers. Crown Fiber Optics’ underground facility locating services include locating telephone, cable television, power, water, sewer, and gas lines.

Business Strategy

Capitalize on Long-Term Growth Drivers. Crown Fiber Optics is positioned to benefit from the increased demand for network telecommunications bandwidth that is necessary to ensure reliable video, voice, and data services. Developments in consumer and business applications within the telecommunications industry, including advanced digital and video service offerings, continue to increase demand for greater wireline and wireless network capacity and reliability. Telecommunications network operators are increasingly deploying fiber optic cable technology deeper into their networks and closer to consumers and businesses in order to respond to consumer demand, competitive realities, and public policy support. Additionally, wireless carriers are upgrading their networks and contemplating next generation mobile solutions in response to the significant demand for wireless broadband, driven by the proliferation of smart phones, mobile data devices and other advances in technology. Increasing wireless data traffic and emerging wireless technologies are United States. Furthermore, significant consolidation and merger activity among telecommunications providers could also provide increased demand for our services as networks are integrated.

Selectively Increase Market Share. We believe Crown Fiber Optics’ reputation for providing high quality services and the ability to provide those services nationally creates opportunities to expand market share. Crown Fiber Optics’ operating structure and multiple points of contact within customer organizations positions it favorably to win new opportunities and maintain strong relationships with its customers.

Crown Fiber Optics recently purchased five micro trenchers to gain a strategic advantage over other companies competing in our market. Micro trenching is a technique to place fiber optic cables underground and is gaining acceptance across multiple markets. Micro trenchers are difficult to obtain as the demand for the equipment is significant. Crown Fiber Optics has a commitment from our equipment vendor for an additional 15 micro trenchers. We believe this advantage will allow it to gain market share and market advantage over our competitors.

Pursue Selective Acquisitions. Crown Fiber Optics may pursue acquisitions that are operationally and financially beneficial as they provide incremental revenue, geographic diversification, and complement existing operations. We generally target companies for acquisition that have defensible leadership positions in their market niches, the opportunity to generate profitability that meets or exceeds industry averages, proven operating histories, sound management and certain clearly identifiable cost synergies.

Customer Relationships

Crown Fiber Optics has recently established relationships with many leading telecommunications providers, including telephone companies, cable multiple system operators, wireless carriers, and telecommunication equipment and infrastructure providers. Crown Fiber Optics’ customer base is primarily concentrated in the Arizona region. We believe that a substantial portion of Crown Fiber Optics’ total contract revenues and operating income will continue to be generated from a concentrated group of customers and that the identity and proportion of contract revenues arising from work for top customers will fluctuate.

Crown Fiber Optics performs a significant amount of our services under master service agreements and other contracts that contain customer-specified service requirements. These agreements include discrete pricing for individual tasks. Crown Fiber Optics generally possesses multiple agreements with each of its significant customers. To the extent that such agreements specify exclusivity, there are often exceptions, including the ability of the customer to issue work orders valued above a specified dollar amount to other service providers, the performance of work with the customer’s own employees, and the use of other service providers when jointly placing facilities with another utility. In most cases, a customer may terminate an agreement for convenience. Historically, multi-year master service agreements have been awarded primarily through a competitive bidding process; however, occasionally we are able to negotiate extensions to these agreements. Crown Fiber Optics provides the remainder of its services pursuant to contracts for specific projects. These contracts may be long-term (with terms greater than one year) or short-term (with terms less than one year) and often include customary retainage provisions under which the customer may withhold 5% to 10% of the invoiced amounts pending project completion and closeout.

Cyclical and Seasonality

The cyclical nature of the industry Crown Fiber Optics serves affects demand for its services. The capital expenditure and maintenance budgets of Crown Fiber Optics’ customers, and the related timing of approvals and seasonal spending patterns, influence its contract revenues and results of operations. Factors affecting Crown Fiber Optics’ customers and their capital expenditure budgets include, but are not limited to, overall economic conditions, including the cost of capital, the introduction of new technologies, the customers’ debt levels and capital structures, our customers’ financial performance, and the customers’ positioning and strategic plans. Other factors that may affect Crown Fiber Optics’ customers and their capital expenditure budgets include new regulations or regulatory actions impacting the customers’ businesses, merger or acquisition activity involving the customers, and the physical maintenance needs of the customers’ infrastructure.

Crown Fiber Optics' operations exhibit seasonality and may be impacted by adverse weather changes as it performs a significant portion of work outdoors. Consequently, adverse weather, which is more likely to occur with greater frequency, severity, and duration during the winter, as well as reduced daylight hours, impact Crown Fiber Optics' operations during the fiscal quarters ending in December and March. Additionally, extreme weather conditions such as major or extended winter storms, droughts and tornados, and natural disasters, such as floods, hurricanes, tropical storms, whether as a result of climate change or otherwise, could also impact the demand for our services, or impact our ability to perform our services.

Competition

The specialty contracting services industry in which we operate is highly fragmented and includes a large number of participants. Crown Fiber Optics competes with several large multinational corporations and numerous regional and privately owned companies. In addition, a portion of Crown Fiber Optics' customers directly perform many of the same services that it provides. Relatively few barriers to entry exist in the markets in which Crown Fiber Optics' operate. As a result, any organization that has adequate financial resources, access to technical expertise, and the necessary equipment may become a competitor and the degree to which an existing competitor participates in the markets that Crown Fiber Optics operates may increase rapidly. The principal competitive factors for Crown Fiber Optics' services include geographic presence, quality of service, worker and general public safety, price, breadth of service offerings, and industry reputation. Crown Fiber Optics believes that it compares favorably to its competitors when evaluated against these factors.

Subcontractors and Materials

Crown Fiber Optics may contract with subcontractors to perform a significant amount of its work and to manage fluctuations in work volumes and to reduce the amount it expend on fixed assets and working capital. These subcontractors are typically small, privately owned companies that provide their own employees, vehicles, tools and insurance coverage. No individual subcontractor is financially significant to us.

For a majority of the contract services Crown Fiber Optics performs, it is provided the majority of the required materials by its customers. Because Crown Fiber Optics' customers retain the financial and performance risk associated with materials they provide, we do not include the costs associated with those materials in our contract revenues or costs of earned revenues. Under contracts that require Crown Fiber Optics to supply part or all of the required materials, it typically does not depend upon any one source for those materials.

Risk Management and Insurance

Claims arising in Crown Fiber Optics' business generally include workers' compensation claims, various general liability and damage claims, and claims related to motor vehicle collisions, including personal injury and property damage. For claims within our insurance program, we retain the risk of loss, up to certain limits, for matters related to automobile liability, general liability (including damages associated with underground facility locating services), workers' compensation, and employee group health. Additionally, within our aggregate coverage limits and above our base layer of third-party insurance coverage, we have retained the risk of loss at certain levels of exposure. We carefully monitor claims and actively participate with our insurers and our third-party claims administrator in determining claims estimates and adjustments. We accrue the estimated costs of claims as liabilities and include estimates for claims incurred but not reported. Due to fluctuations in our loss experience from year to year, insurance accruals have varied and can affect our operating margins. Our business could be materially and adversely affected if we experience an increase of insurance claims at certain amounts, or in excess of our coverage limits.

Regulation

Crown Fiber Optics is subject to various federal, state, and local government regulations, including laws and regulations relating to environmental protection, workplace safety, and other business requirements.

Environmental. A significant portion of the work Crown Fiber Optics performs is associated with the underground networks of its customers and it often operates in close proximity to pipelines or underground storage tanks that may contain hazardous substances. Crown Fiber Optics could be subject to potential material liabilities in the event it fails to comply with environmental laws or regulations or if it causes or is responsible for the release of hazardous substances or causes other environmental damages. In addition, failure to comply with environmental laws and regulations could result in significant costs including remediation costs, fines, third-party claims for property damage, loss of use, or personal injury, and, in extreme cases, criminal sanctions.

Workplace Safety. Crown Fiber Optics is subject to the requirements of the federal Occupational Safety and Health Act ("OSHA") and comparable state statutes that regulate the protection of the health and safety of workers. The failure to comply with OSHA or other workplace safety requirements could result in significant liabilities, fines, penalties, or other enforcement actions and affect our ability to perform the services that we have been contracted to provide to our customers.

Business. Crown Fiber Optics is subject to a number of state and federal laws and regulations, including those related to utility oversight contractor licensing and the operation of Crown Fiber Optic' fleet. If Crown Fiber Optics is not in compliance with these laws and regulations, it may be unable to perform services for its customers and may also be subject to fines, penalties, and the suspension or revocation of our licenses.

Market Opportunity

The Fiber Optics division is positioned to address a substantial market opportunity driven by the growing demand for high-capacity fiber networks, which are increasingly recognized as the most cost-effective technology for operators, offering multiple revenue streams from a single investment. Major industry participants are actively constructing and upgrading wireline networks across broad regions of the U.S., with significant opportunities emerging in rural areas. Additionally, federal initiatives such as the creation of the Federal Communications Commission's (FCC) Rural Digital Opportunity Fund (RDOF) in 2020, which will allocate \$20.4 billion over 10 years, aim to expand fixed broadband and voice service to millions of unserved homes and small businesses. This favorable market environment underscores the division's potential to play a pivotal role in advancing the nation's digital infrastructure.

Leadership

The Fiber Optics division is led by fiber optics industry veterans. Corey Boaz, President of Construction, Fiber Optics, has over 13 years of experience in underground utility infrastructure, with a specialization in trenchless technologies. He has successfully built multiple companies through both organic growth and mergers and acquisitions, showcasing his ability to drive strategic expansion.

WATER SOLUTIONS DIVISION

The Water Solutions division provides improved water quality for communities by providing solutions for a variety of critical challenges.

Slant Wells & Reverse Osmosis Plants

Our Services

The Water Solutions division offers a first of its kind, proprietary design, slant well that allows for a more economical and efficient intake of water, with fewer environmental impacts than a traditional direct sea intake. Our slant wells procure water from the water table located under the ocean, then the extracted water is purified.

Once extracted, the water undergoes purification at a reverse osmosis (RO) plant where advanced membrane filtration technology is used to desalinate the water, removing up to 99 percent of dissolved salts and contaminants. By combining this technology with energy-efficient designs, RO plants provide a sustainable and highly effective solution for desalination.

By not relying on aquifers for refilling, our slant wells leverage an unlimited recharge source from the ocean, avoiding the ecological damage of other techniques while offering a complete solution to address water scarcity and improve water quality at scale. This integrated approach positions Crown as a leader in sustainable water management solutions.

Intellectual Property

Country	Filing Date	Publication No.	Title
US	12-Nov-24	-	SYSTEM AND METHOD FOR A SLANT WELL TO PROCURE WATER FROM UNDER THE OCEAN WATER TABLE
US	1-Dec-24	-	SYSTEM AND METHOD FOR DRILLING SLANT WELLS

Market Opportunity

The Water Solutions division addresses a significant market opportunity driven by water scarcity, population growth, and climate change. According to the World Health Organization, 2.2 billion people globally lack access to safely managed drinking water services, underscoring the urgent need for innovative solutions. As of 2023, according to UNICEF, in Mexico, 9.1 million people face basic drinking water service shortages, with regions like the Baja Peninsula grappling with extreme water scarcity due to limited freshwater resources and overexploited aquifers. Crown's proprietary slant well technology, combined with advanced reverse osmosis (RO) plants, offers a sustainable, reliable solution tailored to these challenges.

Mexico's government is prioritizing sustainable water infrastructure with a 20 billion pesos investment plan between 2024-2030, creating a substantial demand for scalable solutions like Crown's Water Solutions division can provide. Initial projects in high-demand regions, such as Cabo San Lucas, have demonstrated the technology's effectiveness in supporting municipal and industrial water needs. Beyond Mexico, this innovative approach has the potential to address water scarcity challenges in other regions worldwide, potentially positioning Crown as a leader in providing eco-conscious solutions for communities and industries facing critical water resource challenges.

Leadership

Corey Boaz, President of Construction, leverages over 13 years of expertise in trenchless technologies to spearhead Crown's innovative slant wells. His deep knowledge of underground utility infrastructure has been instrumental in designing and developing the slant well, a groundbreaking solution that provides efficient and sustainable water intake with minimal environmental impact. Corey's mastery of trenchless construction techniques ensures the seamless implementation of these projects, even in challenging terrains, while reducing disruption and preserving natural ecosystems. Under his leadership, Crown's slant well technology is setting a new standard for sustainable water infrastructure.

Lead Pipes: Element 82 & PE Pipelines

Our Services

Element 82 and PE Pipelines specialize in advanced techniques for the identification and replacement of lead pipes with minimal disruption.

Element 82 specializes in the identification of lead pipes, supporting local water utilities in meeting the U.S. Environmental Protection Agency's (EPA) compliance requirements to inventory all unknown water service materials. By utilizing Electro Scan's Swordfish, the world's first hand-held buried lead pipe detection tool, Element 82 offers a non-destructive, non-invasive solution for accurately locating lead and galvanized water services. This cutting-edge technology enables utilities to efficiently evaluate their systems, ensuring compliance with regulatory standards while minimizing operational disruptions. On July 26, 2024, we incorporated our wholly-owned subsidiary Element 82 Inc. in Delaware, to own and operate the business.

PE Pipelines specializes in the replacement of lead service lines leveraging three techniques: horizontal drilling, pull-through, and lead removal. Horizontal drilling employs trenchless technology to create precise underground pathways, minimizing excavation and disruption. The pull-through method threads new pipes through existing service lines, streamlining the replacement process and reducing costs. Lead removal involves the complete extraction of old lead service lines, ensuring compliance with regulatory standards and improving water quality. Together, these techniques enable PE Pipelines to deliver customized, cost-effective solutions that help provide Americans safe, reliable drinking water. On July 26, 2024, we incorporated our wholly-owned subsidiary PE Pipelines Inc. in Delaware, to own and operate the business.

Market Opportunity

The market opportunity for lead pipe replacement is significant, driven by public health concerns and reinforced by regulatory mandates and historic funding initiatives. The EPA estimates there are between 9.2 and 12.8 million lead service lines nationwide, posing serious health risks due to lead contamination. In response, the Biden-Harris Lead Pipe and Paint Action Plan aims to replace 100% of these lines within the next decade, supported by \$15 billion in funding from the Bipartisan Infrastructure Law, administered by the EPA.

Additionally, the EPA's Lead and Copper Rule Revisions (LCRR) mandate the replacement of all lead and galvanized service lines, requiring utilities to inventory all unknown water service materials. Crown, through its Element 82 and PE Pipelines businesses, is well-positioned to meet this urgent need by providing advanced identification and cost-effective replacement solutions. These services enable utilities to comply with regulatory requirements, access federal funding, and protect public health by modernizing critical water infrastructure.

Leadership

David Kinsella serves as President of Element 82 and PE Pipelines, bringing over 20 years of experience in strategic operational management and international business. With a strong background in managing large-scale construction projects across the U.S., Australia, Canada, and Europe, David has demonstrated expertise in safety, financial systems, and ISO standards implementation. His Bachelor of Engineering in Civil Engineering, combined with a proven ability to engineer innovative solutions, positions him to lead these divisions in delivering high-quality, efficient, and compliant infrastructure services. David's leadership ensures the divisions remain focused on meeting the evolving needs of municipalities while maintaining the highest standards of safety and performance.

Reverse Stock Split

On June 14, 2024, our stockholders approved a proposal at our 2024 Annual Meeting of stockholders (the "Annual Meeting") further amending our Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), to effect a reverse stock split of our Common Stock at a ratio of up to one-for-one hundred and fifty (1:150), with the final ratio to be determined by the board of directors (the "Board of Directors"), without reducing the authorized number of our shares of Common Stock. Our Board of Directors approved a final split ratio of one-for-one hundred and fifty (1:150), and, following such approval, we filed an amendment to the Certificate of Incorporation with the Secretary of State of the State of Delaware to effect the reverse stock split on June 25, 2024 (the "Reverse Stock Split"). Unless otherwise noted, all share and per share information relating to our Common Stock in this prospectus has been adjusted to reflect the 1-for-150 Reverse Stock Split.

Employees and Human Capital

Crown Electrokinetics Corp. has 65 full-time employees with 14 employees associated with our Smart Windows Division, 9 employees associated with Fiber Optics and Slant Well construction, 32 employees associated with Element 82, and a further 9 performing corporate, finance, marketing, investor relations, and administrative functions. Our employees have extensive industrial experience in leading technology, ink-based manufacturing, 5G construction, and lead detection. We believe that our success is dependent upon, among other things, the services of our senior management, the loss of which could have a material adverse effect upon our prospects. None of our employees are represented by a labor union or covered by a collective bargaining agreement.

As we continue to grow, we will add additional construction, manufacturing engineering, marketing, and administrative personnel.

Properties

On March 8, 2016, we 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, we entered into the first amendment to the lease agreement which increased the monthly lease expense to approximately \$1,200. On October 1, 2017, we 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 we 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, we entered into the fourth amendment to our lease with Oregon State University, which extends the lease expiration date to June 30, 2022. On July 1, 2020, we entered into the fifth amendment to our 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, we 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 Highbay 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, we 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 Highbay 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, we entered into the ninth amendment to our 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 June 30, 2024, we entered into a lease renewal 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 September 30, 2027. The monthly lease expense is as follows:

- Months 1 – 13 — \$17,500
- Months 14 – 25 — \$18,130
- Months 26 – 36 — \$18,760
- Months 37 – 39 — \$19,390

On May 4, 2021, we entered into a lease agreement HP Inc. to lease 3,694 square feet of office and laboratory space at HP Campus Building 10, 1110 NE Circle Blvd, Corvallis, Oregon. On January 26, 2022, we amended the lease commencement date to January 26, 2022. The lease term is 60 months and expires on January 31, 2027. We may extend the lease for an additional 60-month period.

- Months 1 – 12 — \$7,388
- Months 13 – 24 — \$7,610
- Months 25 – 36 — \$7,838
- Months 37 – 48 — \$8,073
- Months 49 – 60 — \$8,315

On October 16, 2023, we entered into a lease agreement with Burnham 182, LLC, to lease 40,524 square feet of vacant land, including a 1,225 square foot Quonset

hut and mobile office, located in Mesa, Arizona. This lease provides yard space with which to store equipment for the Crown Fiber Optics business in Phoenix. The lease term is 36 months and expires on October 31, 2026. The monthly lease expense is as follows:

- Months 1 – 12 — \$9,321
- Months 13 – 24 — \$9,726
- Months 25 – 36 — \$10,131

We paid a security deposit totaling \$31,450 at lease inception date.

On October 31, 2023, we entered into a lease agreement with NFS Leasing, Inc. to lease certain equipment. The equipment will be physically located at a property which is owned and operated by Burnham 182, LLC located in Mesa, Arizona. The lease term is 48 months, and the lease commencement date is November 30, 2023. The monthly lease expense is \$23,060. We paid a security deposit totaling \$23,060 at lease inception date. We have the option to purchase the equipment at fair market value, not to exceed 25% of the total sale price or extend the monthly payments on a month-to-month basis or for a fixed term at a mutually agreed to price and term, upon the expiration of the lease.

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.

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.

Implications of Being an Emerging Growth Company

Up to and until December 31, 2024, we were an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the “JOBS Act”). An emerging growth company may take advantage of specified exemptions from various requirements that are otherwise applicable generally to public companies in the United States.

In the past, we have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we have provided to our investors may be different from the information you might receive from other public reporting companies that are not emerging growth companies in which you hold equity interests. It is possible that some investors will find our Common Stock less attractive as a result of our elections, which may cause a less active trading market for our Common stock and more volatility in our stock price.

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 avail ourselves of this exemption in the past and, therefore, while we were an emerging growth company, we were not subject to new or revised accounting standards at the same time that they became applicable to other public companies that are not emerging growth companies.

We still qualify as a “smaller reporting company,” as such term is defined in Rule 12b-2 under the Exchange Act, after we ceased to qualify as an emerging growth company, and thus we will continue to be permitted to make certain reduced disclosures in our periodic reports and other documents that we file with the SEC.

Corporate Information

Our primary business location is the R&D and Manufacturing facility located at 1110 NE Circle Blvd., Corvallis, OR 97330. We also have an office located at 11601 Wilshire Blvd., Suite 2240, Los Angeles, CA 90025 and a yard located at 12600 S 182nd Pl #10, Gilbert, AZ 85296. Our telephone number is +1 (458) 212-2500, our e-mail address is ir@crownek.com, and our Internet website addresses are www.crownek.com and www.crown-fiberoptics.com. We were incorporated in the State of Delaware on April 20, 2015.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before making any investment decision, you should carefully consider the risk factors set forth below, the information under the caption “*Risk Factors*” in any applicable prospectus supplement, any related free writing prospectus that we may authorize to be provided to you and the information under the caption “*Risk Factors*” in our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q that are incorporated by reference in this prospectus, as updated by our subsequent filings under the Exchange Act.

These risks could materially affect our business, results of operation or financial condition and affect the value of our securities. Additional risks and uncertainties that are not yet identified may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment. You could lose all or part of your investment. For more information, see “*Where You Can Find More Information.*”

Risks Related to Our Securities and the Offering

Future sales or other dilution of our equity could depress the market price of our common stock.

Sales of our common stock, preferred stock, warrants, rights or convertible debt securities, or any combination of the foregoing, in the public market, or the perception that such sales could occur, could negatively impact the price of our common stock.

In addition, the issuance of additional shares of our common stock, securities convertible into or exercisable for our common stock, other equity-linked securities, including preferred stock, warrants or rights or any combination of these securities pursuant to this prospectus will dilute the ownership interest of our common shareholders and could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities.

We may need to seek additional capital. If this additional financing is obtained through the issuance of equity securities, debt securities convertible into equity or options, warrants or rights to acquire equity securities, our existing shareholders could experience significant dilution upon the issuance, conversion or exercise of such securities.

Our management will have broad discretion over the use of the proceeds we receive from the sale our securities pursuant to this prospectus and might not apply the proceeds in ways that increase the value of your investment.

Our management will have broad discretion to use the net proceeds from any offerings under this prospectus, and you will be relying on the judgment of our management regarding the application of these proceeds. Except as described in any prospectus supplement or in any related free writing prospectus that we may authorize to be provided to you, the net proceeds received by us from our sale of the securities described in this prospectus will be added to our general funds and will be used for general corporate purposes. Our management might not apply the net proceeds from offerings of our securities in ways that increase the value of your investment and might not be able to yield a significant return, if any, on any investment of such net proceeds. You may not have the opportunity to influence our decisions on how to use such proceeds.

Until December 31, 2024, we were an “emerging growth company,” which may have reduced the amount of information available to investors.

Until December 31, 2024, we were an “emerging growth company,” as defined in the JOBS Act. The JOBS Act, allowed us to postpone the date by which we must comply with some of the laws and regulations intended to protect investors and to reduce the amount of information we provided in our reports filed with the SEC, which could have adversely undermined investor confidence in our company and adversely affected the market price of our Common Stock. Because we have not yet filed a periodic report since our “emerging growth company” status expired, we have not yet complied with the above-mentioned laws and regulations.

For as long as we remained an “emerging growth company,” we took advantage of certain exemptions from various requirements that are applicable to public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, not being required to comply with any new audit rules adopted by the Public Company Accounting Oversight Board after April 5, 2012 unless the SEC determines otherwise, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

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We incur costs and demands upon management as a result of complying with the laws and regulations affecting public companies.

We incur significant legal, accounting, and other expenses associated with public company reporting requirements. We also incur costs associated with corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”), as well as rules implemented by the SEC and Nasdaq. These rules and regulations increase our legal and financial compliance costs and make some activities more time-consuming and costly. These rules and regulations may also make it difficult and expensive for us to obtain directors’ and officers’ liability insurance. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as our executive officers, which may adversely affect investor confidence and could cause our business or stock price to suffer.

Up to and until December 31, 2024, we qualified as an “emerging growth company” as defined in the JOBS Act. As of January 1, 2025, we no longer qualified as an emerging growth company.

While we were an “emerging growth company,” we were allowed certain exemptions from various reporting requirements that are applicable to public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation and financial statements in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote to approve executive compensation and shareholder approval of any golden parachute payments not previously approved. Because we are no longer an emerging growth company, we will incur significant additional costs associated with compliance with reporting requirements applicable to non-emerging growth companies.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our Common Stock may be negatively affected.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our annual report filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This requires that we incur substantial professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. We may experience difficulty in meeting these reporting requirements in a timely manner for each period.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if we are unable to maintain proper and effective internal controls, it could result in a material misstatement of our financial statements that would not be prevented or detected on a timely basis, which could require a restatement, cause us to be subject to sanctions or investigations by Nasdaq, the SEC, or other regulatory authorities, cause investors to lose confidence in our financial information, or cause our stock price to decline.

As a public company, we incur significant legal, accounting, insurance, and other expenses, and our management and other personnel have and will need to continue to devote a substantial amount of time to compliance initiatives resulting from operating as a public company. We also anticipate that these costs and compliance initiatives will increase in future periods as a result of ceasing to be an “emerging growth company,” as defined in the JOBS Act. As a smaller reporting company as defined in Rule 12b-2 under the Exchange Act, we are currently exempt from the auditor attestation requirement of Section 404(b). If we lose this eligibility, we will incur increased personnel and audit fees in connection with the additional audit requirements.

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USE OF PROCEEDS

Except as described in any applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus for working capital and other general corporate purposes. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, our management will retain broad discretion over the allocation of net proceeds. We will set forth in the applicable prospectus supplement our intended use for the net proceeds received from the sale of any securities. Pending the use of the net proceeds, we may temporarily invest the net proceeds in a variety of capital preservation instruments, including investment grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government, or may hold such proceeds as cash, until they are used for their stated purpose.

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DESCRIPTION OF CAPITAL STOCK

The following is a summary of our capital stock and certain provisions of our certificate of incorporation and bylaws. This summary does not purport to be complete and is qualified in its entirety by the provisions of our certificate of incorporation, as amended, our bylaws and applicable provisions of the Delaware General Corporation Law, or the DGCL.

See “*Where You Can Find More Information*” elsewhere in this prospectus for information on where you can obtain copies of our certificate of incorporation and our bylaws, which have been filed with and are publicly available from the SEC. Our authorized capital stock consists of 800,000,000 shares of common stock, par value \$0.0001 (“Common Stock”), and 50,000,000 shares of preferred stock, par value \$0.0001.

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DESCRIPTION OF COMMON STOCK

As of January 13, 2025, 231,488,212 shares of Common Stock were issued and outstanding.

Our Common Stock is traded on Nasdaq under the symbol “CRKN.” The registrar and transfer agent for our Common Stock is VStock Transfer, LLC, located at 18 Lafayette Place Woodmere, New York 11598.

Voting, Dividend and Other Rights. Each outstanding share of Common Stock entitles the holder to one vote on all matters presented to the shareholders for a vote. Holders of shares of Common Stock have no cumulative voting, preemptive, subscription or conversion rights. All shares of Common Stock to be issued pursuant to this registration statement will be duly authorized, fully paid and non-assessable. Our Board of Directors determines if and when distributions may be paid out of legally available funds to the holders. To date, we have not declared any dividends with respect to our Common Stock. Our declaration of any cash dividends in the future will depend on our Board of Directors’ determination as to whether, in light of our earnings, financial position, cash requirements and other relevant factors existing at the time, it appears advisable to do so. We do not anticipate paying cash dividends on the Common Stock in the foreseeable future.

Rights Upon Liquidation. Upon liquidation, subject to the right of any holders of the preferred stock to receive preferential distributions, each outstanding share of Common Stock may participate pro rata in the assets remaining after payment of, or adequate provision for, all our known debts and liabilities.

Majority Voting. The holders of one-third (33.33%) of the voting power of the shares issued and outstanding and entitled to vote at a meeting of stockholders constitute a quorum at any meeting of the shareholders. A plurality of the votes cast at a meeting of shareholders elects our directors. The Common Stock does not have cumulative voting rights. Therefore, the holders of a majority of the outstanding shares of Common Stock can elect all of our directors. In general, a majority of the votes cast at a meeting of shareholders must authorize shareholder actions other than the election of directors. Most amendments to our certificate of incorporation require the vote of the holders of a majority of all outstanding voting shares.

All issued and outstanding shares of common stock are fully paid and nonassessable. Shares of our common stock that may be offered, from time to time, under this prospectus will be fully paid and nonassessable.

Anti-Takeover Effects of Certain Provisions of Our Articles of Incorporation, as Amended, and Our Bylaws

Our certificate of incorporation and our bylaws contain certain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions and certain provisions of Delaware law, which are summarized below, may discourage coercive takeover practices and inadequate takeover bids. These provisions also may encourage persons seeking to acquire control of us to first negotiate with our Board of Directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock. As discussed below, our Board of Directors has the ability to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in our control or management.

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Delaware Anti-Takeover Statute. We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- before such person became an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction that resulted in the interested stockholder becoming an interested stockholder;

- upon the consummation of the transaction that resulted in the interested stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding shares held by directors who also are officers of the corporation and shares held by employee stock plans; or
- at or following the time such person became an interested stockholder, the business combination is approved by the board of directors of the corporation authorized at a meeting of stockholders by the affirmative vote of the holders of two-thirds (2/3) of the outstanding voting stock of the corporation which is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our Board of Directors does not approve in advance. We also anticipate that Section 203 may discourage attempts that might result in a premium over the market price for the shares of Common Stock held by stockholders.

The provisions of Delaware law and the provisions of our certificate of incorporation and bylaws, as amended, could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

DESCRIPTION OF PREFERRED STOCK

As of January 13, 2025, no shares of preferred stock had been issued or were outstanding.

Under our certificate of incorporation, as amended, our Board of Directors can issue up to 50,000,000 shares of preferred stock from time to time in one or more series. The Board of Directors is authorized to fix by resolution as to any series the designation and number of shares of the series, the voting rights, the dividend rights, the redemption price, the amount payable upon liquidation or dissolution, the conversion rights, and any other designations, preferences or special rights or restrictions as may be permitted by law. Unless the nature of a particular transaction and the rules of law applicable thereto require such approval, our Board of Directors has the authority to issue these shares of preferred stock without shareholder approval.

Our board of directors previously designated 300 shares of our authorized preferred stock as Series A Preferred Stock (the "Series A Preferred Stock"), 1,500 shares as Series B Preferred Stock (the "Series B Preferred Stock"), 600,000 shares of Series C Preferred Stock (the "Series C Preferred Stock"), 7,000 shares as Series D Preferred Stock (the "Series D Preferred Stock"), 77,000 shares as Series E Preferred Stock (the "Series E Preferred Stock"), 9,073 shares as Series F Preferred Stock (the "Series F Preferred Stock"), 9,052 shares as Series F-1 Preferred Stock (the "Series F-1 Preferred Stock") and 9,052 shares as Series F-2 Preferred Stock (the "Series F-2 Preferred Stock"). As of January 6, 2025, no shares of Series A Preferred Stock were issued and outstanding, no shares of Series B Preferred Stock were issued and outstanding, no shares of Series C Preferred Stock were issued and outstanding, no shares of Series D Preferred Stock were issued and outstanding, no shares of Series E Preferred Stock were issued and outstanding, no shares of Series F Preferred Stock were issued and outstanding, no shares of Series F-1 Preferred Stock were issued and outstanding, and no shares of Series F-2 Preferred Stock were issued and outstanding.

We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include, but not be limited to, the following:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;

- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

Series A Preferred Stock and Series B Preferred Stock

On January 22, 2021, we filed Amended and Restated Certificates of Designation, Preferences and Rights to create our Series A Preferred Stock and Series B Preferred Stock (collectively, “Preferred Stock”). The preferences, rights and terms of the Series A Preferred Stock and Series B Preferred Stock are identical except for the conversion price associated with each.

Voluntary Conversion. The Preferred Stock is convertible at any time at the option of the holder thereof, into that number of shares of Common Stock determined by dividing the Stated Value of such Preferred Stock (which is \$1,000) by the conversion price. The current conversion price is \$0.0462 for the Series A Preferred Stock and \$0.0462 for the Series B Preferred Stock. The conversion price shall be adjusted in the event that we (i) pay a stock dividend or otherwise make a distribution or distributions payable in shares of our Common Stock, (ii) subdivide outstanding shares of our Common Stock into a larger number of shares, (iii) combine (including by way of a reverse stock split) outstanding shares of our Common Stock into a small number of shares, or (iv) issue, in the event of a reclassification of shares of our Common Stock, any shares of our capital stock.

Mandatory Conversion. If (i) the closing price of our Common Stock exceeds 300% of the then-current conversion price for five consecutive trading days, (ii) the daily average trading volume during thirty consecutive trading days was in excess of \$100,000 per trading day, (iii) our Common Stock is DWAC eligible and not subject to a “DTC chill” and (iv) the shares of our Common Stock are freely tradeable pursuant to Rule 144 of the Securities Act, we have the right to require the holders of Preferred Stock to convert all remaining shares of Preferred Stock into shares of Common Stock.

Voting, Dividend and Other Rights. Holders of Preferred Stock shall have no voting rights. Holders of the Preferred Stock are only entitled to receive a dividend on shares of 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. All other rights to a dividend were eliminated.

Rights Upon Liquidation. In the event of any liquidation, dissolution or winding-up of the company, whether voluntary or involuntary, the holders of Preferred Stock shall be entitled to receive out of our assets an amount equal to the Stated Value for each share of Preferred Stock before any distribution or payment shall be made to the holders of our Common Stock. Thereafter, the holders of Preferred Stock shall be entitled to receive the same amount that a holder of our Common Stock is entitled to receive if the shares of Preferred Stock were fully converted into shares of our Common Stock, which amounts are to be paid pari passu with holders of our Common Stock, Series C Preferred Stock and Series D Preferred Stock.

Series C Preferred Stock

On March 31, 2021, we filed Certificate of Designation, Preferences and Rights to create our Series C Preferred Stock (“Series C Preferred Stock”). The preferences, rights and terms of the Series C Preferred Stock are as follows.

Voluntary Conversion. The Series C Preferred Stock is convertible at any time at the option of the holder thereof, into that number of shares of Common Stock determined by dividing the Stated Value of such Series C Preferred Stock (which is \$1.00) by the conversion price. The conversion price is \$0.0462 for the Series C Preferred Stock. The conversion price shall be adjusted in the event that we (i) pay a stock dividend or otherwise make a distribution or distributions payable in shares of our Common Stock, (ii) subdivide outstanding shares of our Common Stock into a larger number of shares, (iii) combine (including by way of a reverse stock split) outstanding shares of our Common Stock into a small number of shares, or (iv) issue, in the event of a reclassification of shares of our Common Stock, any shares of our capital stock.

Mandatory Conversion. If (i) the closing price of our Common Stock exceeds 300% of the then-current conversion price for five consecutive trading days, (ii) the daily average trading volume during thirty consecutive trading days was in excess of \$100,000 per trading day, (iii) our Common Stock is DWAC eligible and not subject to a “DTC chill” and (iv) the shares of our Common Stock are freely tradeable pursuant to Rule 144 of the Securities Act, we have the right to require the holders of Series C Preferred Stock to convert all remaining shares of Series C Preferred Stock into shares of Common Stock.

Voting, Dividend and Other Rights. Holders of Series C Preferred Stock shall have no voting rights. Holders of the Series C Preferred Stock are only entitled to receive a dividend 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. All other rights to a dividend were eliminated.

Rights Upon Liquidation. In the event of any liquidation, dissolution or winding-up of the company, whether voluntary or involuntary, the holders of Series C Preferred Stock shall be entitled to receive out of our assets an amount equal to the Stated Value for each share of Series C Preferred Stock before any distribution or payment shall be made to the holders of our Common Stock. Thereafter, the holders of Series C Preferred Stock shall be entitled to receive the same amount that a holder of our Common Stock is entitled to receive if the shares of Series C Preferred Stock were fully converted into shares of our Common Stock, which amounts are to be paid pari passu with holders of our Common Stock, Series A Preferred Stock, Series B Preferred Stock and Series D Preferred Stock.

Series D Preferred Stock

On July 8, 2022, we filed the Certificate of Designations, Preferences and Rights (the “Series D Certificate of Designations”) to create our Series D Preferred Stock (“Series D Preferred Stock”). On February 1, 2023, we filed Amendment No. 1 to the Series D Certificate of Designations. The preferences, rights and terms of the Series D Preferred Stock, as amended, are as follows.

Voluntary Conversion. The Series D Preferred Stock is convertible at any time at the option of the holder thereof, into that number of shares of Common Stock determined by dividing the Stated Value of such Series D Preferred Stock (which is \$1,000) by the conversion price. The conversion price is \$30.00 for the Series D Preferred Stock. The conversion price shall be adjusted in the event that we (i) pay a stock dividend or otherwise make a distribution or distributions payable in shares of our Common Stock, (ii) subdivide outstanding shares of our Common Stock into a larger number of shares, (iii) combine (including by way of a reverse stock split) outstanding shares of our Common Stock into a small number of shares, or (iv) issue, in the event of a reclassification of shares of our Common Stock, any shares of our capital stock.

Voting, Dividend and Other Rights. Holders of Series D Preferred Stock shall have no voting rights. Each outstanding share of Series D Preferred Stock entitles the holder to cumulative dividends at an annual rate of 12% of the Stated Value per share of Series D Preferred Stock (subject to adjustment), payable in shares of Common Stock at our discretion.

Rights Upon Liquidation. In the event of any liquidation, dissolution or winding-up of the company, whether voluntary or involuntary, the holders of Series D Preferred Stock shall be entitled to receive out of our assets an amount equal to the Stated Value for each share of Series D Preferred Stock before any distribution or payment shall be made to the holders of our Common Stock. Thereafter, the holders of Series D Preferred Stock shall be entitled to receive the same amount that a holder of our Common Stock is entitled to receive if the shares of Series D Preferred Stock were fully converted into shares of our Common Stock, which amounts are to be paid pari passu with holders of our Common Stock, Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

Series E Preferred Stock

On February 1, 2023, we filed the Certificate of Designations, Preferences and Rights to create our Series E Preferred Stock. The preferences, rights and terms of the Series E Preferred Stock are as follows.

Voluntary Conversion. Each share of Series E Preferred Stock is convertible at any time at the option of the holder thereof into 1,000 shares of Common Stock, subject to adjustment for stock splits, stock combinations and the like.

Voting, Dividend and Other Rights. Holders of Series E Preferred Stock shall have no voting rights. Each outstanding share of Series E Preferred Stock entitles the holder to receive dividends on an as converted basis together with holders of Common Stock.

Rights Upon Liquidation. In the event of any liquidation, dissolution or winding-up of the company, whether voluntary or involuntary, the holders of Series E Preferred Stock shall be entitled to receive out of our assets the same amount that a holder of Common Stock would receive if the Series E Preferred Stock were fully converted (disregarding any conversion limitations), which amounts are to be paid pari passu with holders of our Common Stock, Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock.

Series F Preferred Stock

On June 5, 2023, we filed a Certificate of Designations, Preferences and Rights of the Series F Preferred Stock with the Secretary of State of the State of Delaware (the “Series F COD”). The preferences, rights and terms of the Series F Preferred Stock are as follows.

Designation, Amount, and Par Value. The number of shares of Series F Preferred Stock designated is 9,073. The shares of Series F Preferred Stock have a par value of \$0.0001 per share and a stated value of \$1,000 per share.

Conversion Price. The Series F Preferred Stock will be convertible into shares of Common Stock at an initial conversion price of \$8.87 (subject to adjustment pursuant to the Certificate of Designation) (the “Conversion Price”).

Dividends. The Series F Preferred Stock will accrue dividends at a rate of 10% per annum (the “Series F Dividend Rate”) payable on the first calendar day of each month in shares of Common Stock, cash, or a combination of the two, at our option. If any shares of Series F Preferred Stock remain outstanding on the eighteen (18) month anniversary of the Initial Issuance Date (as defined in the Series F COD), the Series F Dividend Rate will increase by thirty percent (30%) on the first calendar day of each quarter until no shares of Series F Preferred Stock remain outstanding.

Liquidation. In the event of a Liquidation Event (as defined in the Series F COD), the holders the Series F Preferred Stock shall be entitled to receive in cash out of the assets of the company, before any amount shall be paid to the holders of any other shares of capital stock of the company, equal to the sum of (i) the Black Scholes Value (as defined in the Series F Warrants) with respect to the outstanding portion of all warrants held by such holder of Series F Preferred Stock (without regard to any limitations on the exercise thereof) as of the date of such event and (ii) the greater of (A) 125% of the Series F Conversion Amount (as defined below) on the date of such payment and (B) the amount per share such holder of Series F Preferred Stock would receive if they converted such share of Series F Preferred Stock into Common Stock immediately prior to the date of such payment

Company Redemption. We may redeem all, or any portion, of the Series F Preferred Stock for cash, at a price per share of Series F Preferred Stock equal to the greater of (i) the sum of the stated value plus any declared and unpaid dividends on such share of Series F Preferred Stock (the “Series F Conversion Amount”), and (ii) solely if an Equity Conditions Failure (as defined in the Series F COD) exists, the product of (1) the Series F Conversion Amount divided by the Series F Conversion Price with respect to the amount being redeemed by us multiplied by (2) the greatest Closing Sale Price (as defined in the Series F COD) of the Common Stock on any trading day during the period commencing on the date immediately preceding the notice given by us of such redemption and ending on the trading day immediately prior to the date we make the entire payment required to be made for such redemption.

Maximum Percentage. Holders of Series F Preferred Stock are prohibited from converting shares of Series F 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%) (the “Series F Maximum Percentage”) of the total number of shares of Common Stock issued and outstanding immediately after giving effect to such conversion.

Voting Rights. The holders of Series F Preferred Stock shall have the right to vote with the holders of shares of Common Stock, voting together as one class, with a number of votes per share of Series F Preferred Stock as is equal to the number of shares of Common Stock into which it is the Series F Preferred Stock is then convertible (subject to the Series F Maximum Percentage) on all matters in which the holders of Series F Preferred Stock are permitted to vote with the class of shares of Common Stock pursuant to applicable law. Holders of Series F Preferred Stock are also entitled to vote as a class as expressly provided in the Series F COD and where required pursuant to applicable law.

Series F-1 Preferred Stock

On June 13, 2023, we filed a Certificate of Designations, Preferences and Rights of the Series F-1 Preferred Stock with the Secretary of State of the State of Delaware (the “Series F-1 COD”). The preferences, rights and terms of the Series F-1 Preferred Stock are as follows.

Designation, Amount, and Par Value. The number of shares of Series F-1 Preferred Stock designated is 9,052. The shares of Series F-1 Preferred Stock have a par value of \$0.0001 per share and a stated value of \$1,000 per share.

Conversion Price. The Series F-1 Preferred Stock will be convertible into shares of Common Stock at an initial conversion price of \$8.99 (subject to adjustment pursuant to the Series F-1 COD) (the “F-1 Conversion Price”).

Dividends. The Series F-1 Preferred Stock will accrue dividends at a rate of 10% per annum (the “F-1 Dividend Rate”) payable on the first calendar day of each month in shares of Common Stock, cash, or a combination of the two, at our option. If any shares of Series F-1 Preferred Stock remain outstanding on the eighteen (18) month

anniversary of the Initial Issuance Date (as defined in the Series F-1 COD), the F-1 Dividend Rate will increase by thirty percent (30%) on the first calendar day of each quarter until no shares of Series F-1 Preferred Stock remain outstanding.

Liquidation. In the event of a Liquidation Event (as defined in the Series F-1 COD), the holders the Series F-1 Preferred Stock shall be entitled to receive in cash out of the assets of the company, before any amount shall be paid to the holders of any other shares of capital stock of the company, equal to the sum of (i) the Black Scholes Value (as defined in the Series F-1 Warrants) with respect to the outstanding portion of all Series F-1 Warrants held by such holder of Series F-1 Preferred Stock (without regard to any limitations on the exercise thereof) as of the date of such event and (ii) the greater of (A) 125% of the F-1 Conversion Amount (as defined below) on the date of such payment and (B) the amount per share such holder of Series F-1 Preferred Stock would receive if they converted such share of Series F-1 Preferred Stock into Common Stock immediately prior to the date of such payment

Company Redemption. We may redeem all, or any portion, of the Series F-1 Preferred Stock for cash, at a price per share of Series F-1 Preferred Stock equal to the greater of (i) the sum of the stated value plus any declared and unpaid dividends on such share of Series F-1 Preferred Stock (the “F-1 Conversion Amount”), and (ii) solely if an Equity Conditions Failure (as defined in the Series F-1 COD) exists, the product of (1) the F-1 Conversion Amount divided by the F-1 Conversion Price with respect to the amount being redeemed by us multiplied by (2) the greatest Closing Sale Price (as defined in the Series F-1 COD) of the Common Stock on any trading day during the period commencing on the date immediately preceding the notice given by us of such redemption and ending on the trading day immediately prior to the date we make the entire payment required to be made for such redemption.

Maximum Percentage. Holders of Series F-1 Preferred Stock are prohibited from converting shares of Series F-1 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%) (the “F-1 Maximum Percentage”) of the total number of shares of Common Stock issued and outstanding immediately after giving effect to such conversion.

Voting Rights. The holders of Series F-1 Preferred Stock shall have the right to vote with the holders of shares of Common Stock, voting together as one class, with a number of votes per share of Series F-1 Preferred Stock as is equal to the number of shares of Common Stock into which it is the Series F-1 Preferred Stock is then convertible (subject to the F-1 Maximum Percentage) on all matters in which the holders of Series F-1 Preferred Stock are permitted to vote with the class of shares of Common Stock pursuant to applicable law. Holders of Series F-1 Preferred Stock are also entitled to vote as a class as expressly provided in the Series F-1 COD and where required pursuant to applicable law.

Series F-2 Preferred Stock

On June 14, 2023, we filed a Certificate of Designations, Preferences and Rights of the Series F-2 Preferred Stock with the Secretary of State of the State of Delaware (the “Series F-2 COD”). The preferences, rights and terms of the Series F-2 Preferred Stock are as follows.

Designation, Amount, and Par Value. The number of shares of Series F-2 Preferred Stock designated is 9,052. The shares of Series F-2 Preferred Stock have a par value of \$0.0001 per share and a stated value of \$1,000 per share.

Conversion Price. The Series F-2 Preferred Stock will be convertible into shares of Common Stock at an initial conversion price of \$9.23 (subject to adjustment pursuant to the Series F-2 COD) (the “F-2 Conversion Price”).

Dividends. The Series F-2 Preferred Stock will accrue dividends at a rate of 10% per annum (the “F-2 Dividend Rate”) payable on the first calendar day of each month in shares of Common Stock, cash, or a combination of the two, at our option. If any shares of Series F-2 Preferred Stock remain outstanding on the eighteen (18) month anniversary of the Initial Issuance Date (as defined in the Series F-2 COD), the F-2 Dividend Rate will increase by thirty percent (30%) on the first calendar day of each quarter until no shares of Series F-2 Preferred Stock remain outstanding.

Liquidation. In the event of a Liquidation Event (as defined in the Series F-2 COD), the holders the Series F-2 Preferred Stock shall be entitled to receive in cash out of the assets of the company, before any amount shall be paid to the holders of any other shares of capital stock of the company, equal to the sum of (i) the Black Scholes Value (as defined in the Series F-2 Warrants) with respect to the outstanding portion of all Series F-2 Warrants held by such holder of Series F-2 Preferred Stock (without regard to any limitations on the exercise thereof) as of the date of such event and (ii) the greater of (A) 125% of the F-2 Conversion Amount (as defined below) on the date of such payment and (B) the amount per share such holder of Series F-2 Preferred Stock would receive if they converted such share of Series F-2 Preferred Stock into Common Stock immediately prior to the date of such payment

Company Redemption. We may redeem all, or any portion, of the Series F-2 Preferred Stock for cash, at a price per share of Series F-2 Preferred Stock equal to the greater of (i) the sum of the stated value plus any declared and unpaid dividends on such share of Series F-2 Preferred Stock (the “F-2 Conversion Amount”), and (ii) solely if an Equity Conditions Failure (as defined in the Series F-2 COD) exists, the product of (1) the F-2 Conversion Amount divided by the F-2 Conversion Price with respect to the amount being redeemed by us multiplied by (2) the greatest Closing Sale Price (as defined in the Series F-2 COD) of the Common Stock on any trading day during the period commencing on the date immediately preceding the notice given by us of such redemption and ending on the trading day immediately prior to the date we make the entire payment required to be made for such redemption.

Maximum Percentage. Holders of Series F-2 Preferred Stock are prohibited from converting shares of Series F-2 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%) (the “F-2 Maximum Percentage”) of the total number of shares of Common Stock issued and outstanding immediately after giving effect to such conversion.

Voting Rights. The holders of Series F-2 Preferred Stock shall have the right to vote with the holders of shares of Common Stock, voting together as one class, with a number of votes per share of Series F-2 Preferred Stock as is equal to the number of shares of Common Stock into which it is the Series F-2 Preferred Stock is then convertible (subject to the F-2 Maximum Percentage) on all matters in which the holders of Series F-2 Preferred Stock are permitted to vote with the class of shares of Common Stock pursuant to applicable law. Holders of Series F-2 Preferred Stock are also entitled to vote as a class as expressly provided in the Series F-2 COD and where required pursuant to applicable law.

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. When we offer to sell debt securities, we will describe the specific terms of any debt securities offered from time to time in a supplement to this prospectus, which may supplement or change the terms outlined below. Senior debt securities will be issued under one or more senior indentures, dated as of a date prior to such issuance, between us and a trustee to be named in a prospectus supplement, as amended or supplemented from time to time. Any subordinated debt securities will be issued under one or more subordinated indentures, dated as of a date prior to such issuance, between us and a trustee to be named in a prospectus supplement, as amended or supplemented from time to time. The indentures will be subject to and governed by the Trust Indenture Act of 1939, as amended.

Before we issue any debt securities, the form of indentures will be filed with the SEC and incorporated by reference as an exhibit to the registration statement of which this prospectus is a part or as an exhibit to a current report on Form 8-K. For the complete terms of the debt securities, you should refer to the applicable prospectus supplement and the form of indentures for those particular debt securities. We encourage you to read the applicable prospectus supplement and the form of indenture for those particular debt securities before you purchase any of our debt securities.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title;
- whether or not such debt securities are guaranteed;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, the terms and who the depository will be;
- the maturity date;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

- any restrictions our ability to:
 - incur additional indebtedness;
 - issue additional securities;
 - create liens;
 - pay dividends and make distributions in respect of our capital stock;
 - redeem capital stock;
 - make investments or other restricted payments;
 - sell or otherwise dispose of assets;
 - enter into sale-leaseback transactions;
 - engage in transactions with stockholders and affiliates; or
 - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of any material United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the denominations in which we will issue the series of debt securities;

- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms of the series of warrants being offered, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;

- a discussion of any material or special United States federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the

applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

If any warrants represented by the warrant certificate are not exercised, we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

DESCRIPTION OF RIGHTS

We may issue rights to purchase our common stock or preferred stock, in one or more series. Rights may be issued independently or together with any other offered security and may or may not be transferable by the person purchasing or receiving the subscription rights. In connection with any rights offering to our stockholders, we may enter into a standby underwriting arrangement with one or more underwriters pursuant to which such underwriters will purchase any offered securities remaining unsubscribed after such rights offering. In connection with a rights offering to our stockholders, we will distribute certificates evidencing the rights and a prospectus supplement to our stockholders on the record date that we set for receiving rights in such rights offering. The applicable prospectus supplement or free writing prospectus will describe the following terms of rights in respect of which this prospectus is being delivered:

- the title of such rights;
- the securities for which such rights are exercisable;
- the exercise price for such rights;
- the date of determining the security holders entitled to the rights distribution;
- the number of such rights issued to each security holder;
- the extent to which such rights are transferable;
- if applicable, a discussion of the material United States federal income tax considerations applicable to the issuance or exercise of such rights;
- the date on which the right to exercise such rights shall commence, and the date on which such rights shall expire (subject to any extension);
- the conditions to completion of the rights offering;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the rights;
- the extent to which such rights include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the material terms of any standby underwriting or other purchase arrangement that we may enter into in connection with the rights offering; and
- any other terms of such rights, including terms, procedures and limitations relating to the exchange and exercise of such rights.

Each right will entitle the holder thereof the right to purchase for cash such amount of shares of common stock or preferred stock, or any combination thereof, at such exercise price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the rights offered thereby. Rights may be exercised at any time up to the close of business on the expiration date for such rights set forth in the prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void. Rights may be exercised as set forth in the prospectus supplement relating to the rights offered thereby. Upon receipt of payment and the proper completion and due execution of the rights certificate at the office of the rights agent, if any, or any other office indicated in the prospectus supplement, we will forward, as soon as practicable, the shares of common stock and/or preferred stock purchasable upon such exercise. We may determine to offer any unsubscribed offered securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as set forth in the applicable prospectus supplement.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue, in one more series, units consisting of common stock, preferred stock, debt securities and/or warrants or rights for the purchase of common stock, preferred stock and/or debt securities in any combination. The applicable prospectus supplement will describe:

- the securities comprising the units, including whether and under what circumstances the securities comprising the units may be separately traded;
- the terms and conditions applicable to the units, including a description of the terms of any applicable unit agreement governing the units; and
- a description of the provisions for the payment, settlement, transfer or exchange of the units.

PLAN OF DISTRIBUTION

The securities covered by this prospectus may be offered and sold from time to time pursuant to one or more of the following methods:

- through agents;
- to or through underwriters;
- to or through broker-dealers (acting as agent or principal);
- in “at the market offerings” within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange, or otherwise;
- directly to purchasers, through a specific bidding or auction process or otherwise; or
- through a combination of any such methods of sale.

Agents, underwriters or broker-dealers may be paid compensation for offering and selling the securities. That compensation may be in the form of discounts, concessions or commissions to be received from us, from any selling stockholder, from the purchasers of the securities or from both us and/or any selling stockholder and the purchasers. Any underwriters, dealers, agents or other investors participating in the distribution of the securities may be deemed to be “underwriters,” as that term is defined in the Securities Act, and compensation and profits received by them on sale of the securities may be deemed to be underwriting commissions, as that term is defined in the rules promulgated under the Securities Act.

Each time securities are offered by this prospectus, the prospectus supplement, if required, will set forth:

- the name of the selling stockholder and its relationship to us, if applicable;
- the name of any underwriter, dealer or agent involved in the offer and sale of the securities;
- the terms of the offering;
- any discounts concessions or commissions and other items constituting compensation received by the underwriters, broker-dealers or agents;
- any over-allotment option under which any underwriters may purchase additional securities from us; and
- any initial public offering price.

The securities may be sold at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices. The distribution of securities may be effected from time to time in one or more transactions, by means of one or more of the following transactions, which may include cross or block trades:

- transactions on the Nasdaq or any other organized market where the securities may be traded;
- in the over-the-counter market;
- in negotiated transactions;
- under delayed delivery contracts or other contractual commitments; or
- a combination of such methods of sale.

If underwriters are used in a sale, securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions. Our securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. If an underwriter or underwriters are used in the sale of securities, an underwriting agreement will be executed with the underwriter or underwriters at the time an agreement for the sale is reached. This prospectus and the prospectus supplement will be used by the underwriters to resell the shares of our securities.

If 5% or more of the net proceeds of any offering of our securities made under this prospectus will be received by a FINRA member participating in the offering or affiliates or associated persons of such FINRA member, the offering will be conducted in accordance with FINRA Rule 5121.

To comply with the securities laws of certain states, if applicable, the securities offered by this prospectus will be offered and sold in those states only through registered or licensed brokers or dealers.

Agents, underwriters and dealers may be entitled to indemnification by us against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. The prospectus supplement will describe the terms and conditions of such indemnification or contribution. Some of the agents, underwriters or dealers, or their respective affiliates, may be customers of, engage in transactions with or perform services for us in the ordinary course of business. We will describe in the prospectus supplement naming the underwriter the nature of any such relationship.

Certain persons participating in the offering may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. We make no representation or prediction as to the direction or magnitude of any effect that such transactions may have on the price of the securities. For a description of these activities, see the information under the heading “Underwriting” in the applicable prospectus supplement.

LEGAL MATTERS

The validity of the securities offered in this prospectus will be passed upon for us by Pryor Cashman LLP. Additional legal matters may be passed upon for us, any selling stockholder or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement. As appropriate, legal counsel representing the underwriters, dealers or agents will be named in the accompanying prospectus supplement and may opine to certain legal matters.

EXPERTS

Marcum LLP, an independent registered public accounting firm, has audited our financial statements at and for the years ended December 31, 2023 and December 31, 2022 as set forth in its report included in our annual reports on Form 10-K for the twelve months ended December 31, 2023 and 2022, respectively, which includes an explanatory paragraph regarding our ability to continue as a going concern, and which are incorporated by reference into this prospectus and elsewhere in the registration statement of which this prospectus is a part. Our financial statements are incorporated by reference in reliance on Marcum LLP's reports, given on their authority as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. Any information referenced this way is considered to be part of this prospectus, and any information that we file later with the SEC will automatically update and, where applicable, supersede this information. We incorporate by reference the following documents that we have filed with the SEC (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with the SEC's rules):

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023 filed with the SEC on April 1, 2024;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024, June 30, 2024 and September 30, 2024 filed with the SEC on [May 20, 2024](#), [August 14, 2024](#) and [November 15, 2024](#), respectively;
- our Current Reports on Form 8-K, filed with the SEC on [March 8, 2024](#), [April 29, 2024](#), [May 10, 2024](#), [May 22, 2024](#), [May 28, 2024](#), [June 11, 2024](#), [June 14, 2024](#), [June 21, 2024](#), [July 2, 2024](#), [August 19, 2024](#) (as amended on Form 8-K/A on [August 21, 2024](#)), [September 13, 2024](#), [October 15, 2024](#), and [December 23, 2024](#) (other than information “furnished” under Items 2.02 or 7.01, or corresponding information furnished under Item 9.01 or included as an exhibit); and
- the description of our Common Stock contained in the registration statement on [Form 8-A](#), dated January 22, 2021, File No. 001-39924, and any other amendment or report filed for the purpose of updating such description.

Additionally, all documents filed by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after (i) the date of the initial filing of the registration statement to which this prospectus relates and prior to effectiveness of such registration statement, and (ii) the date of this prospectus and before the termination or completion of any offering hereunder, shall be deemed to be incorporated by reference into this prospectus from the respective dates of filing of such documents, except that we do not incorporate any document or portion of a document that is “furnished” to the SEC, but not deemed “filed.” We will not, however, incorporate by reference in this prospectus any documents or portions thereof that are not deemed “filed” with the SEC, including any information furnished pursuant to Item 2.02 or Item 7.01 of our current reports on Form 8-K unless, and except to the extent, specified in such current reports.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in the applicable prospectus supplement or in any other subsequently filed document that also is or is deemed to be incorporated by reference modifies or supersedes the statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The documents incorporated by reference into this prospectus are also available on our corporate website at www.crownek.com. We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus. You may request a copy of this information at no cost, by writing or telephoning us at the following address or telephone number:

Crown Electrokinetic Corp.
Attention: Chief Financial Officer
1110 NE Circle Blvd.
Corvallis, Oregon 97330
(458)-212-2500

Statements contained in this prospectus as to the contents of any contract or other documents are not necessarily complete, and in each instance you are referred to the copy of the contract or other document filed as an exhibit to the registration statement or incorporated herein, each such statement being qualified in all respects by such reference and the exhibits and schedules thereto.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC registering the securities that may be offered and sold hereunder. The registration statement, including exhibits thereto, contains additional relevant information about us and these securities, as permitted by the rules and regulations of the SEC, we have not included in this prospectus. A copy of the registration statement can be obtained at the address set forth below or at the SEC's website as noted below. You should read the registration statement, including any applicable prospectus supplement, for further information about us and these securities.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's public reference room, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room. Because our common stock is listed on Nasdaq, you may also inspect reports, proxy statements and other information at the offices of Nasdaq.

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available at the SEC's website referred to above. We also maintain a website at www.crownek.com. You may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

\$500,000,000

Crown Electrokinetics Corp.

**Common Stock
Preferred Stock
Debt Securities
Warrants
Rights
Units**

PROSPECTUS

, 2025

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses payable by us in connection with the offering of our securities being registered hereby. All amounts shown are estimates except the SEC registration fee.

SEC registration fee	\$	69,175.69
Legal fees and expenses		*
Accounting fees and expenses		*
Printing and miscellaneous expenses		*
Total expenses	\$	<u>69,175.69</u>

* Estimated expenses are presently not known and cannot be estimated.

Item 15. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent to the registrant. The Delaware General Corporation Law provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise. The registrant's bylaws provide for indemnification by the registrant of its directors, officers and employees to the fullest extent permitted by the Delaware General Corporation Law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payments of dividends or unlawful stock repurchases, redemptions or other distributions, or (iv) for any transaction from which the director derived an improper personal benefit. The registrant's certificate of incorporation provides for such limitation of liability.

The registrant maintains standard policies of insurance under which coverage is provided (a) to its directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act, and (b) to the registrant with respect to payments which may be made by the registrant to such officers and directors pursuant to the above indemnification provision or otherwise as a matter of law.

The registrant expects to enter into customary indemnification agreements with its executive officers and directors that provide them, in general, with customary indemnification in connection with their service to the registrant or on the registrant's behalf.

At present, there is no pending litigation or proceeding involving any of our directors, officers or employees in which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

Item 16. Exhibits and Financial Schedule

See the Exhibit Index attached to this registration statement and incorporated herein by reference.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");

(ii) to reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"), that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

(2) That, for the purposes of determining any liability under the Securities Act, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

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(5) That, for the purpose of determining liability of a Registrant under the Securities Act to any purchaser in the initial distribution of the securities:

The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(6) The undersigned registrant hereby undertakes that:

(i) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(ii) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Los Angeles, California on the 14th day of January, 2025.

CROWN ELECTROKINETICS CORP.

By: /s/ Doug Croxall
 Doug Croxall
 Chairman and Chief Executive Officer

Each person whose signature appears below constitutes and appoints Doug Croxall and Joel Krutz as his true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement on Form S-3 and any subsequent registration statement the Registrant may hereafter file with the Securities and Exchange Commission pursuant to Rule 462 under the Securities Act to register additional securities in connection with this registration statement, and to file this registration statement, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in order to effectuate the same as fully, to all intents and purposes, as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Doug Croxall</u> Doug Croxall	Chairman and Chief Executive Officer (Principal Executive Officer)	January 14, 2025
<u>/s/ Joel Krutz</u> Joel Krutz	Chief Financial Officer and Director (Principal Financial Officer and Principal Accounting Officer)	January 14, 2025
<u>/s/ Daniel Marcus</u> Daniel Marcus	Director	January 14, 2025
<u>/s/ Dr. DJ Nag</u> Dr. DJ Nag	Director	January 14, 2025
<u>/s/ Scott Hobbs</u> Scott Hobbs	Director	January 14, 2025
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EXHIBIT INDEX

Exhibit Number	Description
1.1	Form of Underwriting Agreement*
4.1	Form of Indenture, including form of Note*
4.2	Form of Warrant Agreement, including form of Warrant*
4.3	Form of Unit Agreement*
4.4	Form of Pledge Agreement*
4.5	Form of Rights Certificate*
5.1	Opinion of Pryor Cashman LLP**
23.1	Consent of Independent Registered Public Accounting Firm, Marcum LLP**
23.2	Consent of Pryor Cashman LLP (included in legal opinion filed as Exhibit 5.1)**
24.1	Powers of Attorney (included on signature page)
107	Filing Fee Table

* To be filed, if applicable, by amendment or as an exhibit to a report filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.

** Filed herewith

January 14, 2025

Crown Electrokinetics Corp.
1110 NE Circle Blvd.
Corvallis, Oregon 97330

Re: Crown Electrokinetics Corp.
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Crown Electrokinetics Corp., a Delaware corporation (the “Company”), in connection with the preparation and filing with the Securities and Exchange Commission (the “Commission”) of a Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Act”), relating to the offer and sale by the Company from time to time pursuant to Rule 415 under the Securities Act of up to \$500,000,000 of any combination of (i) common stock, par value \$0.0001 per share (the “Common Stock”), of the Company, (ii) preferred stock, par value \$0.0001 per share, of the Company (the “Preferred Stock”), (iii) debt securities of the Company (“Debt Securities”), (iv) warrants to purchase Common Stock, Preferred Stock, Debt Securities or Units (as defined below) (“Warrants”), (v) units comprised of Common Stock, Preferred Stock, Debt Securities, Warrants and other securities in any combination (“Units”), or (vi) rights to purchase Common Stock, Preferred Stock or Debt Securities (the “Rights”). The Common Stock, Preferred Stock, Debt Securities, Warrants, Units and Rights are sometimes referred to collectively herein as the “Securities.” Securities may be issued in an unspecified number (with respect to Common Stock, Preferred Stock, Warrants, Units and Rights) or in an unspecified principal amount (with respect to Debt Securities). The Registration Statement provides that the Securities may be offered separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more prospectus supplements (each a “Prospectus Supplement”) to the prospectus contained in the Registration Statement.

We have examined the Registration Statement, as well as the original, or photostatic or certified copies, of such records of the Company, certificates of officers of the Company and of public officials and such other documents as we have deemed relevant and necessary as the basis for the opinions set forth below, including without limitation the Certificate of Incorporation of the Company, as amended (the “Charter”), the Bylaws of the Company (the “Bylaws”) and certain resolutions of the Board of Directors of the Company. In such examination, we have assumed the genuineness of all signatures, the completeness and authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies, the completeness and authenticity of the originals of such copies, and the truth, accuracy and completeness of the information, factual matters, representations and warranties contained in such documents.

The opinions set forth below are limited to the laws of the State of New York, and the federal laws of the United States of America, and we express no opinion as to the effect of the laws of any other jurisdiction, domestic or foreign. Without limiting the generality of the foregoing, we express no opinion with respect to (i) state securities or “blue sky” laws, or (ii) state or federal antifraud laws, rules or regulations. We express no opinion herein with respect to the matters covered in such opinion, and to the extent elements of such matters are necessary to the conclusions expressed herein, we have, with your consent, relied upon such opinion.

Crown Electrokinetics Corp.
January 14, 2025
Page 2

For purposes of the opinions set forth below, without limiting any other exceptions or qualifications set forth herein, we have assumed that: (a) after the issuance of any Securities offered pursuant to the Registration Statement, the total number of issued shares of Common Stock or Preferred Stock, as applicable, together with the total number of shares of such stock issuable upon the exercise, exchange, conversion or settlement, as the case may be, of any exercisable, exchangeable or convertible security (including without limitation any Unit or Right), as the case may be, then outstanding, will not exceed the total number of authorized shares of Common Stock or Preferred Stock, as applicable, under the Company’s Charter, (b) with respect to each Authorization (as defined below) and each other action taken by the Company, such Authorization or other action is taken in accordance with all applicable law and with the Charter and the Bylaws of the Company, in each case as in effect at the time such Authorization or other action is taken, (c) the Company has the legal power and authority to execute, deliver and perform its obligations under the Securities, (d) the Registration Statement, and any amendments thereto, shall have become effective under the Securities Act and will remain effective at the time of issuance of any Securities thereunder, (e) a Prospectus Supplement describing each class or series of Securities offered pursuant to the Registration Statement, to the extent required by applicable law and the relevant rules and regulations of the Commission, will be timely filed with the commission, (f) all Securities will be issued in compliance with applicable federal and state securities laws, and (g) the Company is and will remain duly organized, validly existing and in good standing under Delaware law.

For purposes of the opinions set forth below, we refer to the following as the “Future Authorization and Issuance” of Securities:

- with respect to any of the Securities, (a) the due authorization by the Company of the amount, terms and issuance of such Securities (the “Authorization”) and (b) the due issuance of such Securities in accordance with the Authorization therefor upon the receipt by the Company of the consideration (which, in the case of shares of Common Stock or Preferred Stock, is not less than the par value of such shares) to be paid therefor in accordance with the Authorization;
 - with respect to Preferred Stock, (a) the due establishment of the terms of such Preferred Stock by the Company in conformity with the Charter and applicable law and (b) the due execution, acknowledgement and filing with the Delaware Secretary of State, and the effectiveness of, a certificate of designations to the Charter setting forth the terms of such Preferred Stock in accordance with the Charter and applicable law;
 - with respect to Debt Securities, (a) the due authorization, execution and delivery of the indenture or a supplemental indenture relating to such Securities by the Company and the trustee thereunder and/or (b) the establishment of the terms of such Securities by the Company in conformity with the applicable indenture or supplemental indenture and applicable law, and (c) the due execution, authentication and issuance of such Securities in accordance with the applicable indenture or supplemental indenture and applicable law; and
 - with respect to Warrants, Units or Rights, (a) the due authorization, execution and delivery by the Company and the other parties thereto of any agreement under which such Securities are to be issued and (b) the establishment of the terms of such Securities, and the due execution and delivery of such Securities, in conformity with any applicable agreement under which such Securities are to be issued and applicable law.
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Based upon the foregoing, and subject to the additional qualifications set forth below, we are of the opinion that:

1. Upon the Future Authorization and Issuance of shares of Common Stock, such shares of Common Stock will be validly issued, fully paid and nonassessable.
2. Upon the Future Authorization and Issuance of shares of Preferred Stock, such shares of Preferred Stock will be validly issued, fully paid and nonassessable.
3. Upon the Future Authorization and Issuance of Debt Securities, such Debt Securities will be valid and binding obligations of the Company.
4. Upon the Future Authorization and Issuance of Warrants, such Warrants will be valid and binding obligations of the Company.
5. Upon the Future Authorization and Issuance of Units, such Units will be valid and binding obligations of the Company.
6. Upon the Future Authorization and Issuance of Rights, such Rights will be valid and binding obligations of the Company.

The foregoing opinions are subject to: (i) the effect of bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other similar laws now or hereafter in effect relating to or affecting the rights and remedies of creditors; (ii) general principles of equity (whether considered in a proceeding in equity or at law); and (iii) the unenforceability under certain circumstances under law or court decisions of provisions providing for the indemnification of, or contribution to, a party with respect to a liability where such indemnification or contribution is contrary to public policy.

We express no opinion concerning the enforceability of: (i) any waiver of rights or defenses with respect to stay, extension or usury laws; or (ii) provisions relating to choice of law, choice of venue, jurisdiction or waivers of jury trial, and we express no opinion with respect to whether acceleration of Debt Securities may affect the collectability of any portion of the stated principal amount thereof which might be determined to constitute unearned interest thereon.

This opinion letter is rendered as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or any subsequent changes in applicable law that may come to our attention, and we have assumed that no change in the facts stated or assumed herein or in applicable law after the date hereof will affect adversely our ability to render an opinion letter after the date hereof (i) containing the same legal conclusions set forth herein and (ii) subject only to such (or fewer) assumptions, limitations and qualifications as are contained herein.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ PRYOR CASHMAN LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Crown Electrokinetics Corp. on Form S-3, of our report, which includes an explanatory paragraph as to the Company's ability to continue as going concern dated April 1, 2024, with respect to our audits of the consolidated financial statements of Crown Electrokinetics Corp. as of December 31, 2023 and 2022, and for the years ended December 31, 2023 and December 31, 2022, appearing in the Annual Report on Form 10-K of Crown Electrokinetics Corp. for the year ended December 31, 2023. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Our report on the consolidated financial statements refers to a change in the method of accounting for leases effective January 1, 2022.

/s/ Marcum LLP

Marcum LLP
Costa Mesa, CA
January 14, 2025

Calculation of Filing Fee Tables

Form S-3
(Form Type)

Crown Electrokinetics Corp.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit ⁽²⁾	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to Be Paid	Equity	Common stock, par value \$0.0001 per share ⁽⁴⁾⁽⁵⁾	457(o)									
	Equity	Preferred stock, par value \$0.0001 per share ⁽⁴⁾	457(o)									
	Debt	Debt Securities	457(o)									
	Other	Warrants ⁽⁶⁾	457(o)									
	Other	Rights ⁽⁷⁾	457(o)									
	Other	Units ⁽⁸⁾	457(o)									
	Unallocated (Universal) Shelf	Unallocated (Universal) Shelf	415(a)(6)			\$ 451,833,358 ⁽¹⁾⁽²⁾	0.00015310	\$ 69,175.69				
Carry Forward Securities												
Carry Forward Securities	Equity	Common stock, par value \$0.0001 per share ⁽⁴⁾⁽⁵⁾	457(o)						Form S-3	333-262122	January 12, 2022	
	Equity	Preferred stock, par value \$0.0001 per share ⁽⁴⁾	457(o)						Form S-3	333-262122	January 12, 2022	
	Debt	Debt Securities	457(o)						Form S-3	333-262122	January 12, 2022	
	Other	Warrants ⁽⁶⁾	457(o)						Form S-3	333-262122	January 12, 2022	
	Other	Rights ⁽⁷⁾	457(o)						Form S-3	333-262122	January 12, 2022	
	Other	Units ⁽⁸⁾	457(o)						Form S-3	333-262122	January 12, 2022	
	Unallocated (Universal) Shelf	Unallocated (Universal) Shelf	415(a)(6)			\$ 48,166,642 ⁽¹⁾⁽²⁾	0.0000927 ⁽³⁾⁽⁹⁾		Form S-3	333-262122	January 12, 2022	\$ 4,465.05 ⁽³⁾⁽⁹⁾
		Total Offering Amounts				\$ 500,000,000						
		Total Fees Previously Paid						\$ 4,465.05				
		Total Fee Offsets						-				
		Net Fee Due						<u>\$ 69,175.69</u>				

(1) There are being registered hereunder, an indeterminate number or amount, as the case may be, of common stock, preferred stock, debt securities, and warrants to purchase common stock, as may be offered by the registrant from time to time, which together shall have an aggregate initial offering price not to exceed \$500,000,000. If any debt securities are issued at an original issue discount, then the principal amount of such debt securities shall be in such greater amount as shall result in an aggregate initial offering price not to exceed \$500,000,000, less the aggregate dollar amount of all securities previously issued hereunder. The securities included hereunder may be sold separately or with other securities registered hereunder. The securities included hereunder also include an indeterminate number of securities as may be issued upon conversion of or exchange for preferred stock or debt securities that provide for conversion or exchange, upon exercise of warrants, or pursuant to the anti-dilution provisions of any of such securities. In addition, pursuant to Rule 416 of the Securities Act of 1933, as amended, or the Securities Act, this registration statement also covers any additional securities that may be offered or issued in connection with any stock splits, stock dividends or similar transactions. Includes rights to acquire common stock or preferred stock of the registrant under any shareholder rights plan then in effect, if applicable under the terms of any such plan.

(2) The proposed maximum offering price per security will be determined from time to time by the registrant in connection with the issuance of the securities registered by this registration statement. The proposed maximum aggregate offering price has been estimated solely for the purpose of calculating the registration fee. In no event will the aggregate maximum offering price of all securities issued under this registration statement exceed \$500,000,000 and the amount of securities sold pursuant to this registration statement will not exceed the limit in Instruction I.B.6.(a) of Form S-3, as applicable. The amount registered is not specified as to each class of securities to be registered hereunder pursuant to Instruction 2.A.iii.b. of Item 16(b) of Form S-3 under the Securities Act.

(3) Calculated in accordance with Rule 457(o) under the Securities Act based on the maximum aggregate offering price.

(4) Shares of preferred stock or common stock may be issuable upon conversion of debt securities registered hereunder. No separate consideration will be received for such preferred stock or common stock.

(5) Shares of common stock may be issuable upon conversion of shares of preferred stock registered hereunder. No separate consideration will be received for such shares of common stock.

(6) Warrants will represent rights to purchase debt securities, common stock or preferred stock registered hereby. Because the warrants will provide a right only to purchase such securities offered hereunder, no additional registration fee is required.

- (7) Including such currently indeterminate number of rights, including share purchase or subscription rights, as may be issued from time to time at currently indeterminate prices. Because the rights will provide a right only to purchase such securities offered hereunder, no additional registration fee is required.
 - (8) Including such currently indeterminate number of units as may be issued from time to time at currently indeterminate prices. Each unit will represent an interest in two or more securities registered hereby, which may or may not be separable from one another.
 - (9) Pursuant to Rule 415(a)(6) under the Securities Act, the registrant is carrying forward to this registration statement \$48,166,642 of unsold securities (the "Unsold Securities") that have previously been registered under the registrant's registration statement on Form S-3 (File No. 333-262122) filed on January 12, 2022, and declared effective on January 21, 2022 (the "Prior Registration Statement"), and the registration fee of \$4,465.05 associated with the offering of the Unsold Securities (based on the filing fee rate in effect at the time of the filing of the Prior Registration Statement) will continue to be applied to the Unsold Securities that are being carried forward to this registration statement. No additional filing fee is due with respect to the Unsold Securities carried forward in this registration statement. To the extent that, after the filing date hereof and prior to the effectiveness of this registration statement, the registrant sells any Unsold Securities pursuant to the Prior Registration Statement, the registrant will identify in a pre-effective amendment to this registration statement the updated amount of Unsold Securities from the Prior Registration Statement to be included in this registration statement pursuant to Rule 415(a)(6) and the updated amount of new securities to be registered on this registration statement, if any. Pursuant to Rule 415(a)(6), the offering of securities under the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this registration statement.
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