

[Table of Contents](#)

Filed Pursuant to Rule 424(b)(5)
Registration Number 333-263622

PROSPECTUS SUPPLEMENT
(To Prospectus dated March 16, 2022)

25,263,158 shares



Common Stock

We are offering 25,263,158 shares of our common stock. Our common stock is listed on the New York Stock Exchange (“NYSE”) under the symbol “ASPEN”. The last reported sale price of our common stock on the NYSE on November 29, 2022 was \$11.34 per share.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described under the heading “[Risk Factors](#)” beginning on page S-14 of this prospectus supplement before buying our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	\$9.500000	\$240,000,001
Underwriting discounts and commissions (1)	\$0.434625(2)	\$ 6,405,000(3)
Proceeds, before expenses, to us	<u>\$9.065375</u>	<u>\$233,595,001(4)</u>

- (1) We have agreed to reimburse the underwriters for certain expenses in connection with this offering. See “Underwriting”.
- (2) Reflects underwriting discounts and commissions relating to the shares other than those purchased by Koch Investments Group, LLC (together with its affiliates, “Koch”) and/or certain of its affiliates (as described below). The underwriters will not receive any discounts or commissions relating to any shares purchased by Koch and/or certain of its affiliates.
- (3) Reflects total underwriting commissions and discounts on shares purchased by investors other than Koch and/or certain of its affiliates.
- (4) The proceeds, before expenses, to us include the proceeds from shares purchased by Koch and/or certain of its affiliates, for which the underwriters will not receive any discount or commissions, at the public offering price and the proceeds from shares sold to the public, at a price equal to the public offering price less the underwriting discounts and commissions.

The underwriters also may purchase up to an additional 3,789,473 shares of common stock at the public offering price, less the underwriting discounts and commissions payable by us, within 30 days from the date of this prospectus supplement.

Our existing shareholder Wood River Capital, LLC, an affiliate of Koch, and/or certain of its affiliates have indicated an interest in purchasing up to \$100.0 million of our common stock in this offering at the public offering price. However, because indications of interest are not binding agreements or commitments to purchase, Wood River Capital, LLC and/or certain of its affiliates may determine to purchase fewer securities than they indicate an interest in purchasing or not to purchase any securities in this offering.

The underwriters are offering the common stock as set forth under “Underwriting”. We expect that delivery of the common stock will be made to investors in book-entry form through the Depository Trust Company on or about December 2, 2022.

Joint Book-running Managers

Cowen

Barclays

Book-running Managers

Piper Sandler

Oppenheimer & Co.

Co-Managers

B. Riley Securities

Craig-Hallum

Prospectus Supplement dated November 29, 2022

[Table of Contents](#)**TABLE OF CONTENTS****Prospectus Supplement**

ABOUT THIS PROSPECTUS SUPPLEMENT	S-1
FORWARD-LOOKING STATEMENTS	S-2
PROSPECTUS SUPPLEMENT SUMMARY	S-6
THE OFFERING	S-12
RISK FACTORS	S-14
USE OF PROCEEDS	S-22
CAPITALIZATION	S-23
DILUTION	S-24
MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS	S-25
UNDERWRITING	S-30
LEGAL MATTERS	S-37
EXPERTS	S-37
WHERE YOU CAN FIND MORE INFORMATION	S-37
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	S-38

Prospectus

ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	2
RISK FACTORS	5
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	6
USE OF PROCEEDS	10
PLAN OF DISTRIBUTION	11
DESCRIPTION OF COMMON STOCK	13
DESCRIPTION OF PREFERRED STOCK	14
DESCRIPTION OF DEBT SECURITIES	15
DESCRIPTION OF WARRANTS	21
DESCRIPTION OF RIGHTS	23
DESCRIPTION OF UNITS	25
CERTAIN PROVISIONS OF DELAWARE LAW AND OF OUR AMENDED AND RESTATED CERTIFICATE OF INCORPORATION AND RESTATED BYLAWS	27
LEGAL MATTERS	30
EXPERTS	30
WHERE YOU CAN FIND MORE INFORMATION	30
INCORPORATION OF DOCUMENTS BY REFERENCE	31

[Table of Contents](#)**ABOUT THIS PROSPECTUS SUPPLEMENT**

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock and updates the information contained in the accompanying prospectus and the documents incorporated by reference herein and therein. The second part is the accompanying prospectus, which provides more general information about securities that we may offer from time to time, some of which does not apply to this offering. This prospectus supplement and the accompanying prospectus relate to a registration statement that we filed with the U.S. Securities and Exchange Commission (“SEC”) using a shelf registration process (File No. 333-263622). To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or documents previously filed with the SEC that are incorporated by reference herein, the information in this prospectus supplement will supersede such information. For a more detailed understanding of an investment in our common stock, you should read both this prospectus supplement and the accompanying prospectus, together with the information incorporated by reference herein and therein and additional information described under the heading “Incorporation of Certain Documents by Reference” in this prospectus supplement.

Neither the Company nor any underwriter has authorized anyone to provide you with information that is different from or in addition to the information contained in this prospectus supplement and the accompanying prospectus and in any related free writing prospectus filed by us with the SEC. Accordingly, neither the Company nor any underwriter takes any responsibility for, or can provide any assurance as to the reliability of, any information that others may give. Neither the Company nor any underwriter is making offers to sell or seeking offers to buy common stock in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and therein and any related free writing prospectus is accurate only as of the respective dates of such documents, regardless of the time of delivery of this prospectus supplement or any sale of common stock offered hereby. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus supplement and the accompanying prospectus to “Aspen”, the “Company”, “we”, “us” and “our” refer to Aspen Aerogels, Inc., a Delaware corporation, together with its consolidated subsidiaries. All other brand names or trademarks appearing in this prospectus supplement and the accompanying prospectus are the property of their respective holders. Use or display by us of other parties’ trademarks or trade dress in this prospectus supplement and the accompanying prospectus is not intended to, and does not, imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owners.

[Table of Contents](#)**FORWARD-LOOKING STATEMENTS**

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein include 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”) that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, “believe,” “expect,” “anticipate,” “estimate,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “targets,” “likely,” “will,” “would,” “could,” “should,” “continue,” and similar expressions or phrases, or the negative of those expressions or phrases, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus supplement and the accompanying prospectus and incorporated by reference herein and therein, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The sections in our periodic reports, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, titled “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2022, June 30, 2022, and September 30, 2022 titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as other sections in this prospectus supplement, the accompanying prospectus and the documents or reports incorporated by reference herein and therein, discuss some of the factors that could contribute to these differences. These forward-looking statements include, among other things, statements about:

- the expected future growth of the market for our aerogel products and our continued gain in market share, in particular in the electric vehicle (“EV”) market, the energy infrastructure insulation market, the lithium-ion battery thermal barrier markets, and other markets we target;
- our beliefs about the competitive strengths and value propositions of our technology and our products and our ability to gain additional market share and enter into new markets based on those strengths;
- our expectation that our investment in incremental manufacturing and operating expense will sustain long-term growth in our existing markets and develop new business opportunities;
- our plans to continue to develop and optimize aerogel products for high-value applications within the sustainable building materials market and our plan to realize revenue from this market;
- our plans and expectations to partner with industry leaders in the battery and EV market or such partnerships resulting in products and technologies or otherwise resulting in meaningful financial results;
- our expectations about the size and timing of awarded business in the EV market, future revenues and profit margins, arising from our supply relationship and contract with automotive original equipment manufacturers (“OEMs”), and our ability to win more business and increase revenue in the EV market;
- our pursuit of high-value opportunities for our aerogel products within different segments of the EV market, the global insulation market, including the sustainable building materials market, and our plans to leverage our aerogel technology platform to develop innovative, aerogel enhanced products for applications in new markets;
- our plans to focus additional resources to continue to grow our share of the EV market and the energy infrastructure insulation market;
- the current or future trends in the energy, energy infrastructure, chemical and refinery, liquid natural gas (“LNG”), sustainable building materials, EV thermal barrier, EV battery materials or other markets and the impact of these trends on our business;

Table of Contents

- our investments in the EV market and aerogel technology platform;
- our pursuit of and the expected greater adoption of our products in the LNG and power generation markets and our expectation that product revenue will be generated in large part by demand for insulation associated with scheduled plant shutdowns, or turnarounds, and other maintenance-related projects;
- our expectation that our products will be specified during the design phase in a growing number of new plant construction and capital expansion projects and our expectation that we will have an increasing percentage of our products sold for use in capital projects;
- our expectation that the growth in global energy demand and EV market will result in increased new-build and large capacity expansion projects, driving demand for our aerogel products;
- our plans to continue our strategy of working with innovative companies to target and penetrate additional market opportunities;
- our plans to develop strategic partnerships to facilitate market penetration beyond the energy infrastructure and sustainable building materials market, as well as the expected goals and priorities of such strategic partnerships;
- our belief that an adequate long-term supply of silica-precursors and other raw materials is available and that our plans to reduce reliance on precursors susceptible to significant price fluctuations will be successful;
- our belief that we can strategically increase our capacity to meet the demand or that we will be able to make such capacity increases in a timely manner;
- our expectation in our ability to implement lower cost product formulations and realize material purchasing efficiencies;
- our belief that our portfolio of patents, trade secrets and know-how present a significant barrier to potential new entrants in the production of aerogel blanket insulation;
- our expectation that we will be successful in enforcing and defending our patents against competitors and that such patents are valid and enforceable, as well as our expectations about the costs and consequences of our current or potential future patent litigation and the potential for additional patent litigation;
- our belief that our products possess strong competitive advantages over traditional insulation materials, including the superior thermal performance and the thin, easy-to-use and durable blanket form of our products;
- our belief that the net proceeds from this offering, if consummated, will partially fund the cost of the construction of Phase I of our second aerogel manufacturing facility in Statesboro, Georgia (“Plant 2”) and continued productivity improvements to our Phase I of Plant 2 and all related thermal assembly facilities and equipment and that we may obtain the required additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete these projects;
- our expectations regarding the investment to open Plant 2 and the anticipated job creation as a result thereof;
- the anticipated aerogel capacity expansion as a result of Plant 2 and the expected commencement of production;
- our belief that our end-use customers will continue to invest in major energy infrastructure projects;
- our expectation that we will continue to sell our products in the sustainable building materials and other end markets;
- our expectations that our work with partners will accelerate the commercialization of these carbon aerogel anode materials in the EV market;

Table of Contents

- our belief that the potential for significant technological innovation in traditional insulation materials is limited and that new high-performance materials will be required to meet evolving market requirements for energy efficient insulation systems;
- our belief that our aerogel products and manufacturing processes are proprietary and that we can protect our patents, trade secrets and know-how associated therewith;
- our belief that we can continue to improve the cost efficiency of our manufacturing process, that our current expansion plans offer attractive returns on incremental invested capital, and that we will focus our development efforts on new products and next-generation technology with application in new, high-value market segments;
- our belief that we will have opportunities to address additional high-value applications in the estimated \$3.9 billion global insulation market, and that we are well-positioned to leverage a decade's worth of research and development to design and commercialize disruptive aerogel products for a wide array of new markets;
- our belief that our products have the lowest cost on a fully-installed basis or offer significant life-cycle cost savings in energy infrastructure and certain other applications as compared to traditional insulation materials;
- our plans to continue to expand our global sales force and distribution network to support anticipated growth in customers and demand for our products and our plans to seek to promote greater enterprise-wide utilization of our products by existing end-use customers;
- our expectations and projections about future revenues, revenue growth, costs, expenses, production volumes, manufacturing productivity, gross profit, profitability, net loss, loss per share and adjusted EBITDA, sources and uses of cash, liquidity, cash flow, capital requirements and the sufficiency of our existing cash balance and available credit;
- our expectations that most of our revenue will continue to come from a relatively small number of customers for the foreseeable future;
- our expectations of long-term revenue growth, with increasing levels of gross profit and improved cash flows from operations and our expectations that we will incur significant capital expenditures related to the expansion of our manufacturing capacity to support this expected long-term growth in demand;
- our expectation to continue to increase investment in research and development in our efforts to enhance and expand our aerogel technology platform;
- our expectations about the impact of new accounting pronouncements on our consolidated financial statements and related disclosures;
- our belief that our experienced and dedicated leadership team will provide us with a competitive advantage in the industry;
- our belief of our technological and market leadership in aerogels;
- the expected future development of new aerogel technologies;
- our expectations about limitations of net operating losses;
- our expectation of rising interest rates and operating costs;
- rising inflation;
- our expectation of completing construction and commissioning of phase one of our planned second plant by the first half of 2024 and our ability to do so at a cost consistent with our prior estimates;
- our beliefs about our planned Mexico thermal barrier assembly facility and its timely operations, its ability to meet the demand, the growth in thermal barrier demand to match the assembly operation and vice versa; and

[Table of Contents](#)

- our ability to shift thermal barrier assembly operations from East Providence, Rhode Island to Mexico in a timely manner.

We may not achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this prospectus supplement, the accompanying prospectus or the documents incorporated by reference herein or therein, particularly in the “Risk Factors” section that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. For a summary of such factors, please refer to the section titled “Risk Factors” in this prospectus supplement, the accompanying prospectus and our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K, as well as any amendments thereto, as filed with the SEC and which are incorporated herein by reference. The information contained in this document is believed to be current as of the date of this document. We do not intend to update any of the forward-looking statements after the date of this document to conform these statements to actual results or to changes in our expectations, except as required by law.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus supplement, the accompanying prospectus or in any document incorporated by reference herein or therein might not occur. Investors are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus supplement, the accompanying prospectus or the document incorporated by reference herein or therein. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

[Table of Contents](#)**PROSPECTUS SUPPLEMENT SUMMARY**

This summary highlights selected information included or incorporated by reference in this prospectus supplement and the accompanying prospectus and does not contain all of the information that may be important to you. You should carefully review this entire prospectus supplement and the accompanying prospectus, including the risk factors and financial statements and related notes thereto included or incorporated by reference herein and therein, before making a decision to purchase our common stock.

Overview of Aspen

We are an aerogel technology company that designs, develops and manufactures innovative, high-performance aerogel materials used primarily in the energy infrastructure, building materials and EV markets. We have provided high-performance aerogel insulation to the energy infrastructure and sustainable building materials markets for more than a decade. We have also recently introduced a line of high-potential aerogel thermal barriers for use in battery packs in the EV market and other energy storage systems. In addition, we are developing applications for our aerogel technology in the battery materials and a number of other high-potential markets. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our end-user customers select our products where thermal performance is critical and to save money, improve resource efficiency, enhance sustainability, preserve operating assets, and protect workers.

Our technologically advanced insulation products are principally targeted at the estimated \$3.9 billion annual global market for energy infrastructure insulation materials. Our aerogel insulation has undergone rigorous technical validation and is used by many of the world's largest oil producers and the owners and operators of refineries, petrochemical plants, liquefied natural gas facilities and power generating and distribution assets, such as ExxonMobil, Reliance Industries, PTT LNG, and Royal Dutch Shell. Our products replace traditional insulation in existing facilities during regular maintenance, upgrades and capacity expansions. In addition, our aerogel products are increasingly being specified for use in new-build energy infrastructure facilities.

We introduced our two key aerogel insulation product lines for the energy infrastructure market, Pyrogel® and Cryogel®, in 2008. Pyrogel and Cryogel have undergone rigorous technical validation by industry-leading end-users and achieved significant market adoption. We introduced our aerogel insulation product for the building materials market, Spaceloft®, in 2006. We believe that our long-term record of success positions us for future growth and continued gain in market share in the energy infrastructure and building materials markets.

We have grown our business by forming technical and commercial relationships with industry leaders, which has allowed us to optimize our products to meet the particular demands of targeted market sectors. We have benefited from our technical and commercial relationships with ExxonMobil in the oil refinery and petrochemical sector and with TechnipFMC in the offshore oil sector. We will continue our strategy of working with innovative companies to target and penetrate additional opportunities in the energy infrastructure and sustainable building materials markets.

We are also actively developing a number of promising aerogel products and technologies for the EV market. We have developed and are commercializing our proprietary line of PyroThin® thermal barriers for use in battery packs of electric vehicles. Our PyroThin product is an ultra-thin, lightweight and flexible thermal barrier designed with other functional layers to impede the propagation of thermal runaway across multiple lithium-ion battery system architectures. Our thermal barrier technology is designed to offer a unique combination of thermal management, mechanical performance and fire protection properties. These properties enable electric vehicle manufacturers to achieve critical battery performance and safety goals.

[Table of Contents](#)

In addition, we are seeking to leverage our patented carbon aerogel technology to develop industry-leading battery materials for use in lithium-ion battery cells. These battery materials have the potential to increase the energy density of the battery cells, thus enabling an increase in the driving range of electric vehicles.

In November 2022, we entered into a definitive loan agreement with General Motors Holdings LLC (“GM”), an affiliate of General Motors, for a secured lending commitment of up to \$100.0 million in connection with the construction of our second aerogel manufacturing facility in Statesboro, Georgia (“Plant 2”). The \$100.0 million of loan proceeds will be available to Aspen to draw on a periodic basis from January 2023 through September 2023, subject to certain conditions precedent to funding and other financing requirements. The Loan (defined below) has a maturity date of the earlier of (i) March 31, 2025 and (ii) 90 days prior to the maturity date of any other debt facility to which the Loan Parties (defined below) may be a party (other than any revolving loan agreement), and carries no prepayment penalty. Please see below under “—*Recent Developments—GM Loan Agreement*” for further description of the GM Loan Agreement (defined below).

As a result of our expectations for significant growth in our demand for our thermal barrier products in the EV market, as well as expectations of continued strong demand for our industrial insulation products, we previously announced the acceleration of our capital projects plan. To prepare for this anticipated growth in demand, we are advancing progress on the construction of Plant 2, with over half of the site work completed and the commissioning of the first phase of this facility expected in the first half of 2024. In addition, we effectively transferred our EV thermal barrier assembly from Rhode Island to a larger site in Monterrey, Mexico with higher volume processes that will enable our profitable growth in the future. We are also continuing to make productivity improvements to our aerogel manufacturing facility in East Providence, Rhode Island. We expect to build the second plant in two phases and we estimate a cost of approximately \$575.0 million for the first phase and approximately \$125.0 million for the second phase. However, as a result of cost inflation and supply chain challenges for this project, we are reviewing the plans, schedule and scope of the project in order to manage these potential cost drivers with the aim of keeping our capital expenditures on the second plant as close as possible to our estimates while still seeking to achieve our goal of having the first phase of the plant increase our annual revenue capacity by approximately \$650.0 million and the second phase by approximately \$700.0 million. Nonetheless, further cost inflation and/or supply chain disruptions, as well as potential changes in the scope of the facilities, could lead to increases to our prior estimates. See “Forward-Looking Statements.”

We intend to use the net proceeds from this offering to partially fund the cost of construction of Phase I of Plant 2 and for other general corporate purposes. We will require additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete the construction projects. We cannot assure you that we will be able to raise the required additional capital on attractive terms, or at all. See “Use of Proceeds”.

Recent Developments

General Motors Loan Agreement

On November 28, 2022, Aspen Aerogels Georgia, LLC, a Georgia limited liability company (the “Borrower”), a wholly-owned subsidiary of Aspen Aerogels, Inc., a Delaware corporation (the “Company”), entered into a Loan Agreement (the “Loan Agreement”), by and between (i) the Borrower, (ii) the Company and (iii) Aspen Aerogels Rhode Island, LLC, a Rhode Island limited liability company (“Aspen RI” and, together with the Borrower and the Company, each, a “Loan Party” and collectively, the “Loan Parties”), as guarantors, and (iv) General Motors Holdings LLC (“GM”), as lender. The Borrower is required to use the proceeds of the Loan (as defined below) in connection with the construction and operation of Plant 2 in the manner prescribed in a pre-determined budget (subject to a permitted variance) to fund the construction of and equipment for the first phase of Plant 2 (the “Budget”). The Loan Agreement provides for a multi-draw senior secured term loan in an aggregate principal amount of up to \$100.0 million (the “Loan”), available to the Borrower to draw on a delayed draw basis after

Table of Contents

January 1, 2023 to September 30, 2023, subject to certain conditions precedent to funding. The interest rate on the Loan is equal to the term Secured Overnight Financing Rate published by CME Group Benchmark Administration Limited for a six-month interest period (“Term SOFR”) plus 8.0% per year, subject to a term SOFR floor of 1.0% (the “Floor”), with a maturity date of the earlier of (i) March 31, 2025 and (ii) 90 days prior to the maturity date of any other debt facility to which the Loan Parties may be a party (other than any revolving loan agreement) (the “Maturity Date”). At the Borrower’s election and prior to the issuance of a certificate of occupancy for the Plant, interest may be paid-in-kind (“PIK”) at a rate equal to Term SOFR (subject to the Floor) plus 9.0% per year.

The Loan Agreement includes representations and warranties, affirmative covenants (including reporting obligations and an affirmative covenant requiring that proceeds of the Loan are used solely in accordance with the Budget), and negative covenants that are customary in credit agreements and construction financing documents and, in each case, subject to certain permitted exceptions and baskets. There are no financial covenants. The Loan is prepayable at any time without premium or penalty and must be paid in full on the Maturity Date. Mandatory prepayment of the Loan is required upon the occurrence of certain events as specified in the Loan Agreement, including the receipt of proceeds (i) upon certain dispositions of assets and (ii) upon incurrence of certain indebtedness and in connection with specified equity offerings (other than proceeds used exclusively for the Plant) in excess of \$300.0 million. The Loan is guaranteed by the Company and Aspen RI, and is secured by a first-priority lien in favor of GM on substantially all assets of the Loan Parties, including the Rhode Island real estate and the Georgia leasehold interest, with the exception of the Company’s intellectual property assets and certain pumps pledged to secure an EDGE grant from the Georgia Department of Community Affairs. The existing convertible note issued to Wood River Capital, LLC (the “Purchaser”), an entity associated with Koch Investments Group, LLC (together with its affiliates, “Koch”), on February 18, 2022 are subordinated to the Loan pursuant to a customary subordination agreement.

The first \$33 million of the Loan will be available upon meeting various conditions, including, among other conditions, the receipt of an equity investment of not less than \$100.0 million in gross proceeds by Koch, which shall be contributed to the Borrower and disbursed in full in accordance with the Budget prior to any advance under the Loan Agreement. The remainder of the Loan will be available upon meeting various conditions (including, among other conditions, the concurrent contribution to the Borrower and disbursement of proceeds received from any equity or debt financings that is permitted under the Loan Agreement in an amount equal to three times the amount of such borrowing) and meeting certain milestones (with a cap of (i) \$50 million in the aggregate of the Loan that may be funded prior to achieving the first site work and foundations milestone and (ii) \$80 million in the aggregate of the Loan that may be funded prior to achieving the second key framing and structural steel milestone).

The Loan Agreement also contains events of default that are customary in credit agreements and construction financing documents, pursuant to which GM would be permitted, under certain circumstances, to accelerate the Loan and terminate any unused commitments thereunder and to exercise other remedies, subject in certain circumstances to specified grace periods, thresholds, and exceptions. These events of default include, among others, payment defaults, cross-defaults to certain material indebtedness, material contracts and project documents related to the Plant, covenant defaults, material inaccuracy of representations and warranties, bankruptcy events, governmental attachment or levy of assets, material judgments, invalidity of Loan Documents and material defects with respect to guarantees and collateral, change of control, certain criminal or civil proceedings, certain defaults under performance bonds issued with respect to Plant 2, lapse of certain permits required for Plant 2, cessation of construction and failure to achieve certain milestones.

Amendment to Wood River Capital, LLC Note Purchase Agreement

On November 28, 2022, we entered into an Amendment to the Note Purchase Agreement (the “Amendment”) with Wood River Capital, LLC to modify the Note Purchase Agreement (the “Note Purchase Agreement”), dated as of February 15, 2022, by and among the Company and the Purchaser. The Amendment revises the Note

Table of Contents

Purchase Agreement to remove certain transfer restrictions on Convertible Senior PIK Toggle Notes due 2027, dated February 18, 2022 (the “Convertible Note”), and the shares underlying the Convertible Note.

Amendment to the Wood River Capital, LLC Convertible Note

On November 28, 2022, we entered into an amendment to the Convertible Note (the “Convertible Note Amendment”) with Wood River Capital, LLC to reduce the initial Conversion Price (as defined in the Convertible Note) by \$5.00 per share from \$34.936625 per share to \$29.936625 per share, by increasing the initial Conversion Rate (as defined in the Convertible Note) from 28.623257 shares per \$1,000 of Capitalized Principal Amount (as defined in the Convertible Note) to 33.400100 shares per \$1,000 of Capitalized Principal Amount under the Convertible Note.

Silicon Valley Bank Credit Facility Termination

On November 28, 2022, the Company and Silicon Valley Bank (“SVB”) terminated the Second Amended and Restated Loan and Security Agreement, dated as of March 12, 2021 and amended on September 29, 2021, December 27, 2021, March 31, 2022, April 28, 2022, June 23, 2022, August 26, 2022 and October 14, 2022 (as amended, the “SVB Loan Agreement”), by and between the Company, as borrower, and SVB, as lender, pursuant to a pay-off letter (the “Termination Letter”), in accordance with the terms of the SVB Loan Agreement. Pursuant to the Termination Letter and the SVB Loan Agreement, the Company continues to be bound by certain terms under the SVB Loan Agreement that customarily survive the termination of similar agreements, including, without limitation, certain indemnification obligations. The SVB Loan Agreement provided for an asset-based revolving credit facility in an amount of up to \$20 million. As disclosed in the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 and filed with the SEC on November 7, 2022, the Company had no amounts drawn under the SVB Loan Agreement as of September 30, 2022. As of the date of the Termination Letter, the Company had no amounts due or owed to SVB under the SVB Loan Agreement for any principal, interest, or other amounts, other than approximately \$1.2 million in letters of credit that were issued under the SVB Loan Agreement and will be cash collateralized in connection with the termination of the SVB Loan Agreement. As the Company is required to pay unused line fees with respect to the SVB Loan Agreement, but does not plan to request any further advancements under the SVB Loan Agreement, the Company and SVB have decided to terminate the SVB Loan Agreement. The Company is permitted pursuant to the terms of the Loan Agreement with GM to replace the SVB Loan Agreement with a future working capital line of up to \$50 million, subject to entry into an intercreditor agreement on the terms set forth in the Loan Agreement with GM.

Legal Proceedings

Patent Enforcement Actions

In May 2016, we filed a complaint for patent infringement against Nano Tech Co., Ltd. (Nano), and Guangdong Alison Hi Tech., Ltd. (Alison) in the International Trade Commission, or ITC. In February 2018, the ITC issued its final determination that Nano and Alison had infringed asserted Aspen patents and that they have not proven the patents are invalid except with respect to one dependent product claim, which the ITC found was not infringed. The ITC affirmed that Alison and Nano each violated Section 337 of the Tariff Act and issued a limited exclusion order prohibiting importation of infringing aerogel insulation products manufactured by Alison and Nano. Alison’s appeal with respect to a product patent to the United States Court of Appeals for the Federal Circuit (CAFC) was rejected, and resulted in CAFC affirming the validity of our patent. The exclusion order, which is enforced by the United States Customs and Border Protection, is currently in effect.

For more information about legal proceedings and infringement actions, see the Form 10-K for the year ended December 31, 2021 (Form 10-K). The following information supplements the information under the caption “Legal Proceedings” set forth in the Form 10-K.

Table of Contents

On January 28, 2021, a search order was executed and relevant evidence secured at the principal places of business of AMA S.p.A. and AMA Composites S.r.l. (collectively, AMA) in San Martino in Rio and Campogalliano, respectively, based on an ex-parte search order issued by the Court of Genoa, Italy at our request in connection with alleged infringement of the Italian part of our patents previously asserted successfully against Nano and Alison in Germany. The Court of Genoa subsequently held a hearing and confirmed the validity of the search order and its execution. While the search proceedings do not take a position on the infringement issues, we may use any evidence collected during the search proceedings to prove infringement. As a result, on May 3, 2021, we filed an infringement complaint, a writ of summons, as known in Italy, at the Court of Genoa alleging that AMA has infringed the Italian part of three European patents (same patents asserted in the German litigation) and a patent on composition of aerogel-based composites in connection with AMA's resale of aerogel products supplied by Chinese companies and sale of any products derived therefrom. We are seeking monetary damages and preliminary injunction of AMA's alleged infringing activities. We expect the Court of Genoa to assess our claims and AMA's defense through appointment of an expert after the submission of relevant writs and evidence. We issued a press release on May 6, 2021 describing the patent enforcement action of May 3, 2021 (Press Release). On June 7, 2021, AMA served us a copy of a request it previously filed with the Court of Genoa seeking an ex-parte preliminary injunction against us alleging the Press Release constituted anti-competitive conduct and that it infringed AMA's trademark rights. The service of the request followed the court's prior denial of the ex-parte order and an order requiring AMA to serve the request on us. The court subsequently conducted an oral hearing on June 15, 2021. On June 24, 2021, the court denied AMA's request for a preliminary injunction, reasoning that our Press Release was factually accurate, was not misleading, distinguished facts from opinions and that it was neither anti-competitive nor did it infringe trademark rights of AMA. The Court also ordered AMA to pay certain of our legal fees. On July 5, 2021, AMA informed us that it has decided not to appeal the denial of June 24, 2021. We subsequently learned that AMA had also made a criminal complaint against our chief executive officer for defamation in connection with the Press Release. On December 31, 2021, the local prosecutor, after reviewing the underlying facts, rejected AMA's arguments and requested the judge overseeing the matter to dismiss the complaint against our chief executive officer, which the judge did in April 2022. In November 2022, we learned that AMA had filed a second criminal complaint in a different jurisdiction in Italy. The second criminal complaint contains the same allegations based on the same underlying facts as the first, however, the judge in this jurisdiction has ordered the local prosecutor to carry out additional investigations and to identify the address of our chief executive officer for service. As with the first complaint, we believe this complaint is without merit and intend to seek the same disposition of the matter in this second jurisdiction as was achieved in the first jurisdiction. In response to our infringement complaint, AMA has also added as a counter-claim in connection with its claims regarding the Press Release, those same claims that it previously sought a preliminary injunction which was denied by the court. The patent infringement proceedings are ongoing.

Other Matters

In October 2022, we were served with a summons from Aerogels Poland Nanotechnology LLC (APN), a former distributor of our products in Poland with whom we previously terminated our distribution agreements because of APN's failure to pay amounts due to Aspen. The summons asserts causes of action against Aspen for declaratory judgement, breach of contract, breach of implied contract, equitable estoppel and fraud, and states that plaintiffs will seek declaratory judgment, actual and liquidated damages in the sum of \$20 million, and attorneys' fees. However, we have not been served with any complaint in this matter and our review of the docket indicates that no complaint is on file. If a complaint is filed, we intend to vigorously defend this matter.

Due to their nature, it is difficult to predict the outcome or the costs involved in any litigation or administrative proceedings, including any appeals process. Furthermore, the counter parties in these proceedings may have significant resources and interest to litigate and therefore, these litigation matters could be protracted and may ultimately involve significant legal expenses. In addition to the foregoing, we have been and may be from time to time a party to other legal proceedings that arise in the ordinary course of business and to other patent enforcement actions to assert our patent rights.

[Table of Contents](#)***Additional Information***

For additional information related to our business and operations, please refer to the reports incorporated herein by reference, including our Annual Report on Form 10-K for the year ended December 31, 2021 and subsequent reports filed with the SEC, as described under the caption “Incorporation of Certain Documents by Reference” on page S-38 of this prospectus supplement.

Our Corporate Information

Our principal office is located at 30 Forbes Road, Building B, Northborough, Massachusetts 01532, and our telephone number is (508) 691-1111. Our website address is <https://www.aerogel.com>. The information contained on, or that can be accessed through, our website is not a part of this prospectus supplement. We have included our website address in this prospectus supplement solely as an inactive textual reference.

[Table of Contents](#)**THE OFFERING**

Issuer	Aspen Aerogels, Inc., a Delaware corporation
Common stock offered by us	25,263,158 shares of our common stock.
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to an additional 3,789,473 shares of our common stock.
Common stock to be outstanding after this offering	66,104,285 shares (or 69,893,758 shares if the underwriters' option to purchase additional shares is exercised in full).
Use of proceeds	<p>We expect to receive net proceeds from this offering of approximately \$233.3 million (or approximately \$267.6 million if the underwriters exercise their option to purchase additional shares in full), after deducting the underwriting discounts and our estimated offering expenses.</p> <p>We intend to use the net proceeds from this offering (i) to partially fund the construction of Phase I of Plant 2 (see "<i>—Overview of Aspen</i>"), and (ii) for other general corporate purposes, including, but not limited to, working capital, investments and acquisitions.</p> <p>The construction of Phase I of Plant 2 that is expected to be partially funded with the net proceeds from this offering will require additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete these projects. We cannot assure you that we will be able to raise the required additional capital on attractive terms, or at all.</p>
Risk factors	An investment in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-14 of this prospectus supplement before deciding to invest in our common stock.
New York Stock Exchange symbol for our common stock	Our common stock is listed on the New York Stock Exchange under the symbol "ASPN".

The number of shares of our common stock shown above to be outstanding after this offering is based on 40,841,127 shares of our common stock issued and outstanding as of September 30, 2022, and excludes:

- 3,989,342 shares of our common stock issuable upon the exercise of options outstanding as of September 30, 2022 at a weighted average exercise price of \$11.21 per share;
- 259,766 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of September 30, 2022;
- 365,685 shares of our common stock reserved for future issuance under the 2014 Employee, Director and Consultant Equity Incentive Plan as of September 30, 2022; and
- 3,520,103 shares of our common stock issuable upon the conversion of the \$100.0 million in aggregate outstanding principal amount of the Convertible Note issued to the Purchaser on February 18, 2022, as

[Table of Contents](#)

amended by the Convertible Note Amendment, along with any additional shares issuable upon the conversion of accrued but unpaid interest thereon.

Unless otherwise stated, all information in this prospectus supplement excludes the shares referenced in the bullets immediately above and assumes no exercise by the underwriters of their option to purchase additional shares in this offering.

Our existing shareholder Koch and/or certain of its affiliates have indicated an interest in purchasing up to \$100.0 million of our common stock in this offering at the public offering price. However, because indications of interest are not binding agreements or commitments to purchase, Koch and/or certain of its affiliates may determine to purchase fewer securities than they indicate an interest in purchasing or not to purchase any securities in this offering. As adjusted for this offering and assuming Koch and/or certain of its affiliates purchase of \$100.0 million of common stock in the offering, Koch would beneficially own approximately 29.2% of our outstanding common stock (or approximately 27.6% of our outstanding common stock if the underwriters exercise their option to purchase additional shares). The underwriters will not receive any discounts or commissions relating to any shares of common stock purchased by Koch and/or certain of its affiliates.

S-13

[Table of Contents](#)**RISK FACTORS**

An investment in our common stock involves significant risks. Before making an investment in our common stock, you should carefully read all of the information contained in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference herein and therein. For a discussion of risks that you should carefully consider before deciding to purchase any of our common stock, please review the risk factors disclosed below, together with the other information in this prospectus supplement, the accompanying prospectus, and the information and documents incorporated by reference herein and therein. Any of these risks, as well as additional risks not currently known to us or that we currently deem immaterial, may adversely affect our business, financial condition, results of operations, and prospects, resulting in a decline in the trading price of our common stock and loss of all or part of your investment.

Risks Related to this Offering and Our Common Stock

Our management will have broad discretion over the actual amount and timing of the expenditures of the proceeds we receive in this offering and might not apply these proceeds in ways that enhance our financial condition or operating results or increase the value of your investment.

We intend to use the net proceeds we receive from this offering to partially fund the construction of Phase I of Plant 2 (see “*Prospectus Summary—Overview of Aspen*”), and (ii) for other general corporate purposes, including, but not limited to, working capital, investments and acquisitions. This expected use of our net proceeds from this offering represents our intentions based upon our current plans and business conditions. The amount and timing of our actual expenditures may vary significantly depending on numerous factors. Because of the number and variability of factors that will determine our use of the proceeds from this offering their ultimate use may vary substantially from their currently intended use. As a result, our management will retain broad discretion over the allocation of the net proceeds we receive from this offering and could spend the proceeds in ways that do not necessarily improve our financial condition or operating results or enhance the value of our common stock and your investment therein. Additionally, until the net proceeds we receive are used, they may be placed in investments that do not produce income or that lose value. See “*Use of Proceeds*” for additional information.

In addition, we will require additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete our planned construction of Phase I of Plant 2 and other capital projects. The availability of additional funds will depend on a variety of factors, some of which are outside of our control. We cannot assure you that we will be able to raise the required additional capital on attractive terms, or at all. In addition, if additional funds are raised by issuing equity or equity-linked securities, stockholders may incur dilution.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock as of September 30, 2022. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share. After giving effect to the sale of 25,263,158 shares of our common stock in this offering at the public offering price of \$9.50 per share and based on our net tangible book value as of September 30, 2022 of \$4.47 per share, if you purchase shares of common stock in this offering, you will suffer substantial and immediate dilution of \$3.21 per share. Further dilution of your investment will result from, among other things, the future exercise of stock options, vesting of restricted stock units and conversion of some or all of the Convertible Note, to the extent we deliver shares upon conversion of the Convertible Note. See “*Dilution*” for a more detailed description of the dilution investors purchasing shares of our common stock in the offering will incur.

[Table of Contents](#)

A significant portion of our total outstanding shares may be sold into the market at any time, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. Such sales, or the perception in the market that the holders of a large number of such shares intend to sell, could reduce the market price of our common stock significantly. In connection with this offering, we, our executive officers and directors and Koch and certain of its affiliates have entered into lock-up agreements with Cowen and Company, LLC and Barclays Capital Inc., as representative of the underwriters, that prohibit us, our executive officers and directors and Koch and certain of its affiliates, subject to certain exceptions or receipt of the prior written consent of Cowen and Company, LLC and Barclays Capital Inc., from disposing or pledging, or hedging against, our common stock or securities convertible into or exchangeable for shares of our common stock for a period of up to 60 days after the date of this prospectus supplement. However, all of the shares sold in this offering (except for any shares sold to our existing shareholder, Wood River Capital, LLC, an affiliate of Koch, and/or certain of its affiliates pursuant to their indication of interest) and the remaining shares of our common stock outstanding immediately prior to this offering will not be subject to lock-up agreements with Cowen and Company, LLC and Barclays Capital Inc. and, except to the extent such shares are held by our affiliates, will be freely tradable without restriction. In addition, Cowen and Company, LLC and Barclays Capital Inc. may, in its discretion, release the lock-up restrictions described above at any time without notice.

We expect that upon consummation of this offering, our ability to use the net operating loss carryforwards that we currently hold will be subject to significant limitation, which would result in a higher effective tax rate and adversely affect our financial condition and results of operations.

During 2014, we performed analyses in order to determine whether any limitations might exist on the utilization of net operating losses and other tax attributes pursuant to Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), as well as similar state provisions. Generally, a change of more than 50% in the ownership of a company's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit a company's ability to use its net operating loss carryforwards attributable to the period prior to such change. Based on these analyses, we determined that it is more likely than not that an ownership change occurred on June 18, 2014 upon the closing of our initial public offering, resulting in an annual limitation on the use of our net operating losses and other tax attributes as of such date. As a result, our usable prior net operating losses were limited to \$155.2 million, including built-in gains of \$42.0 million at the date of that ownership change. We expect that the consummation of this offering will likely result in an ownership change under Section 382 of the Code. Such an ownership change would lead to the use of our net operating loss carryforwards being restricted further. Our inability to use a substantial portion of our net operating loss carryforwards would result in a higher effective tax rate and adversely affect our financial condition and results of operations.

The trading market in our common stock has been limited and substantially less liquid than the average trading market for a stock quoted on The New York Stock Exchange.

Since our initial listing on The New York Stock Exchange on June 13, 2014, the trading market in our common stock has been limited and substantially less liquid than the average trading market for companies listed on The New York Stock Exchange. The listing of our common stock on The New York Stock Exchange does not assure that a meaningful, consistent and liquid trading market currently exists or will exist in the future. We cannot predict whether a more active market for our common stock will develop in the future. An absence of an active trading market could adversely affect our stockholders' ability to sell our common stock at current market prices in short time periods, or possibly at all. An inactive market may also impair our ability to raise capital by selling our common stock and may impair our ability to acquire other companies, products or technologies by using our common stock as consideration. Additionally, analyst coverage of our common stock may be limited and such lack of coverage may have a depressive effect on the market price for our common stock. As of September 30, 2022, significant amount of our outstanding shares of common stock were held by our executive officers,

[Table of Contents](#)

directors, principal stockholders and their respective affiliates, which may adversely affect the liquidity of the trading market for our common stock, in as much as federal securities laws restrict sales of our shares by these stockholders. If our affiliates continue to hold their shares of common stock, there will be a more limited trading volume in our common stock, which may make it more difficult for investors to sell their shares or increase the volatility of our stock price.

We expect that the price of our common stock will fluctuate substantially, which could subject us to securities class action litigation and result in substantial losses to our stockholders.

The price of our common stock fluctuates in a broad range. For example, on January 2, 2019, the closing price of our shares of common stock was \$2.22, and on November 18, 2021, the closing price of our shares of common stock was \$63.66. Such fluctuations may be due to a number of factors, including the following, some of which are beyond our control:

- volume and timing of orders for our products;
- quarterly and yearly variations in our or our competitors' results of operations;
- our announcement or our competitors' announcements regarding new products, product enhancements, significant contracts, number of distributors, acquisitions or strategic investments;
- announcements of technological innovations relating to aerogels, thermal management and energy infrastructure insulation;
- results of operations or projections that vary from the expectations of securities analysts and investors;
- the periodic nature of our sales cycles, in particular for capital projects in the energy infrastructure market;
- our ability to develop, obtain regulatory clearance or approval for and market new and enhanced products on a timely basis;
- future sales of our common stock, including sales by our executive officers, directors and significant stockholders and their respective affiliates;
- announcements by third parties of significant claims or proceedings against us, including with regard to intellectual property and product liability;
- changes in accounting principles; and
- general U.S. and global economic conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

Furthermore, the U.S. stock market has at times experienced extreme volatility that in some cases has been unrelated or disproportionate to the operating performance of particular companies. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our actual operating performance.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation. If we become involved in securities litigation, it could have a substantial cost and divert resources and the attention of our senior management team from our business regardless of the outcome of such litigation.

Securities analysts may not continue coverage of our common stock or may issue negative reports, which may have a negative impact on the market price of our common stock.

The trading market for our common stock relies in part on the research and reports that industry or financial analysts publish about us or our business. Securities analysts may elect not to provide research coverage of our

[Table of Contents](#)

common stock. If securities analysts do not cover or continue to cover our common stock, the lack of research coverage may cause the market price of our common stock to decline. If one or more of the analysts who elects to cover us downgrades our stock, our stock price would likely decline substantially. If one or more of these analysts ceases coverage of us, we could lose visibility in the market, which in turn could cause our stock price to decline. In addition, rules mandated by the Sarbanes-Oxley Act of 2002, as amended, and a global settlement reached in 2003 between the SEC, other regulatory agencies and a number of investment banks have led to a number of fundamental changes in how analysts are reviewed and compensated. In particular, many investment banking firms are required to contract with independent financial analysts for their stock research. It may be difficult for companies such as ours, with smaller market capitalizations, to attract independent financial analysts that will cover our common stock. This could have a negative effect on the market price of our stock.

Our directors, officers and principal stockholders have significant voting power and may take actions that may not be in the best interests of our other stockholders.

As of September 30, 2022, our executive officers, directors and five percent or greater stockholders (which stockholders, for the avoidance of doubt, include Koch) and/or their affiliates owned approximately 17.2% of our shares of common stock. Koch beneficially owned approximately 21.5% of our shares of common stock prior to this offering and, as adjusted for this offering, would beneficially own approximately 29.2% of our common stock (or approximately 27.6% of our common stock if the underwriters exercise their option to purchase additional shares). As a result, these stockholders, if they act together, may be able to control the management and affairs of the Company and certain matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change of control and might adversely affect the market price of our common stock. This concentration of ownership may not be in the best interests of our other stockholders.

Anti-takeover provisions in our restated certificate of incorporation and restated bylaws, and Delaware law, could delay or discourage a takeover.

Anti-takeover provisions in our restated certificate of incorporation and restated bylaws and Delaware law may have the effect of deterring or delaying attempts by our stockholders to remove or replace management, engage in proxy contests and effect changes in control. The provisions of our charter documents include:

- procedures for advance notification of stockholder nominations and proposals;
- the inability of our stockholders to call a special meeting of the stockholders and the inability of our stockholders to act by written consent;
- the ability of our board of directors to create new directorships and to fill any vacancies on the board of directors;
- the ability of our board of directors to amend our restated bylaws without stockholder approval; and
- the ability of our board of directors to issue up to 5,000,000 shares of preferred stock without stockholder approval upon the terms and conditions and with the rights, privileges and preferences as our board of directors may determine.

In addition, as a Delaware corporation, we are subject to Delaware law, including Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless certain specific requirements are met as set forth in Section 203. These provisions, alone or together, could have the effect of deterring or delaying changes in incumbent management, proxy contests or changes in control.

Table of Contents

Our restated certificate of incorporation designates a state or federal court located within the State of Delaware as the exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our restated certificate of incorporation provides that, subject to limited exceptions, a state or federal court located within the State of Delaware will be the exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, our restated certificate of incorporation or our restated bylaws, or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine. This exclusive forum provision does not apply to suits brought to enforce a duty or liability created by the Exchange Act. It could apply, however, to a suit that falls within one or more of the categories enumerated in the exclusive forum provision and asserts claims under the Securities Act, inasmuch as Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rule or regulations thereunder. There is uncertainty as to whether a court would enforce such provision with respect to claims under the Securities Act, and our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our restated certificate of incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

We do not intend to pay cash dividends in the foreseeable future and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We have never declared or paid cash dividends on our common stock, and we do not intend to pay any cash dividends on our common stock in the foreseeable future. We currently expect to retain all available funds and any future earnings for use in the operation and expansion of our business. In addition, the terms of our revolving credit facility restrict our ability to pay dividends and any future credit facilities, loan agreements, debt instruments or other agreements may further restrict our ability to pay dividends. Payments of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our business, results of operations and financial condition, current and anticipated cash needs, plans for expansion and any legal or contractual limitations on our ability to pay dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of potential gain for the foreseeable future.

Risks Related to our Business and Strategy

The terms of the Loan Agreement with GM require us to meet certain operating covenants and place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

On November 28, 2022, the Borrower entered into the Loan Agreement with GM. The Loan to be advanced under the Loan Agreement is guaranteed by us and secured by a security interest in and first-priority lien on substantially all of our assets, other than our intellectual property, certain pumps pledged to secure an EDGE grant from the Georgia Department of Community Affairs to the Borrower and other customary collateral exclusions. The Loan Agreement contains affirmative and negative covenants and events of default that are customary in credit agreements and construction financing documents. Affirmative covenants include, among

[Table of Contents](#)

others, reporting obligations and an affirmative covenant requiring that proceeds of the Loan are used solely in accordance with the Budget delivered to GM in accordance with the terms of the Loan Agreement. Negative covenants include, among others, covenants restricting us from transferring all or any part of our business or property (including intellectual property), incurring additional indebtedness, except for certain permitted indebtedness, engaging in mergers or acquisitions, repurchasing shares, paying dividends or making other distributions, making investments, and creating other liens on our assets (including our intellectual property), in each case subject to customary exceptions and baskets. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility. These restrictions may include, among other things, limitations on borrowing and specific restrictions on the use of the proceeds of such additional debt financing, as well as prohibitions on our ability to incur further debt financing, create liens, pay dividends, redeem capital stock or make investments.

If we default under the terms of the Loan Agreement beyond the applicable grace period, if any, GM may declare all amounts outstanding under the Loan Agreement to be immediately due and payable and terminate all unused commitments to extend further credit under the Loan Agreement. If we are unable to repay the amounts due under the Loan Agreement upon such GM's declaration, GM could proceed against the collateral granted to it to secure the obligations under the Loan Agreement (including, but not limited to taking control of our pledged assets and foreclosing on other collateral). In the event of a default under the terms of the Loan Agreement, GM could also require us to renegotiate the Loan Agreement on terms less favorable to us. Either the enforcement by GM upon its declaration to accelerate the obligations under the Loan Agreement or the renegotiation of the Loan Agreement's terms, each as mentioned above, could adversely affect our operations. Further, if we are liquidated, GM's right to repayment, as well as the right to repayment of other lenders under any additional debt financing, would be senior to the rights of the holders of our common stock.

Our Loan Agreement with GM contains restrictions that limit our flexibility to operate our business.

Our obligations under the Loan Agreement with GM are secured by a first-priority lien on substantially all of our assets, other than our intellectual property, certain pumps pledged to secure an EDGE grant from the Georgia Department of Community Affairs to the Borrower and other customary collateral exclusions. The Loan Agreement contains various affirmative and negative covenants that limit our ability to engage in specified types of transactions. These covenants, which are each subject to customary exceptions, limit our ability to, without GM's prior written consent, effect any of the following, among other things:

- sell, lease, transfer or otherwise dispose of certain assets;
- acquire another company or business or enter into a merger or similar transaction with third parties;
- incur additional indebtedness;
- make investments;
- encumber or permit liens on certain assets; and
- make restricted payments with respect to our capital stock.

Our board or management team could believe that taking any one of these actions would be in our best interests and the best interests of our stockholders. If that were the case and if we were unable to complete any of these actions because GM does not provide its consent, it could adversely impact our business, financial condition and results of operations.

In the event of a default under the Loan Agreement, including, among other things, our failure to make any payment when due or our failure to comply with any provision of the Loan Agreement, subject to customary grace periods set forth in the Loan Agreement, GM could elect to declare all amounts outstanding under the Loan Agreement to be immediately due and payable and terminate all unused commitments to extend further credit under the Loan Agreement. If we are unable to repay the amounts due under the Loan Agreement upon such

[Table of Contents](#)

GM's declaration, GM could proceed against the collateral granted to it to secure the obligations under the Loan Agreement, which could have an adverse effect on our business, financial condition and results of operations.

GM's interests as a lender may not always be aligned with our interests. If our interests come into conflict with those of GM, including in the event of a default or an Event of Default (as defined in the Loan Agreement) under the Loan Agreement, GM may choose to act in its self-interest, which could adversely affect the success of our current and future collaborative efforts with GM.

If we fail to successfully construct and operate our planned second manufacturing facility in Bulloch County, Georgia and increase our production capacity that our continued and anticipated growth requires in a timely manner, or at all, our growth may be hindered and our business or results of operations may be materially adversely affected.

We have projected significant increase in the demand for our aerogel products, driven by our expected growth in the EV market and sales to our automotive OEM customers. Our continued growth requires that we increase our production capacity. Consequently, we are constructing Plant 2, a second manufacturing plant in Bulloch County, Georgia. We expect to build the second plant in two phases and estimate a cost of approximately \$575.0 million for the first phase and approximately \$125.0 million for the second phase. However, as a result of cost inflation and supply chain challenges for this project, we are continuing to review the plans, schedule and scope of the project in order to manage these potential cost drivers with the aim of keeping our capital expenditures on Plant 2 as close as possible to our estimates while still seeking to achieve our goal of having the first phase of Plant 2 increase our annual revenue capacity by approximately \$650.0 million and the second phase by approximately \$700.0 million. Nonetheless, further cost inflation and/or supply chain disruptions, as well as potential changes in the scope of the facilities, could lead to increases to our estimates. In addition, we are constructing a state-of-the-art, automated thermal barrier fabrication operation in Monterrey, Mexico in order to keep pace with the significant potential demand for our PyroThin thermal barriers. See "Forward-Looking Statements."

While we expect to have the first phase of Plant 2 operational in the first-half of 2024, if, for any reason, including cost increases or our inability to obtain financing, Plant 2 should fail to be completed in a timely manner, or at all, or any of the production lines in the second manufacturing plant do not operate according to our expectations, sales may be impeded, our growth may be hindered and our business or results of operations may be materially adversely affected.

Many factors could delay or prevent the construction of Plant 2 or cause us to reduce the scale or scope of the new facilities, including:

- increases in the cost of the first or second phase of construction;
- our inability to obtain financing on favorable terms, or at all;
- design, engineering and construction difficulties or delays;
- our failure or delay in obtaining necessary legal, regulatory, and other approvals;
- interruptions in the supply of the necessary equipment, or construction materials or labor or an increase in their price;
- opposition of local interests; and
- natural disasters, accidents, political unrest, or unforeseen events.

Many factors could prevent Plant 2 from producing at their expected effective or nameplate capacity or could cause us to reduce the scale or scope of the new facilities, including:

- design and engineering failures;
- inability to retain and train a skilled workforce;

Table of Contents

- the challenges of operating significantly higher volume equipment at the planned Plant 2 than currently employed at our existing facility in East Providence, Rhode Island;
- improper operation of the manufacturing equipment;
- decreases in our manufacturing yields due to the inefficient use of the materials needed to make our products in our manufacturing process;
- the availability of raw materials to support the levels of production that we anticipate at these facilities;
- strikes or labor disputes; and
- damage to the manufacturing equipment due to design and engineering flaws, construction difficulties or operator error.

Any such expansion will place a significant strain on our senior management team and our financial and other resources. The costs associated with and the resources necessary for our expansion could exceed our expectations and result in a materially adverse impact on our business, results of operations, financial condition and cash flows. If we are unable to complete the project contemplated, the costs incurred in connection with such projects may not be recoverable.

[Table of Contents](#)**USE OF PROCEEDS**

We expect to receive net proceeds from this offering of approximately \$233.3 million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, we estimate that the net proceeds from this offering will be approximately \$267.6 million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering, if consummated, (i) to partially fund the construction of Phase I of Plant 2 (see “*Prospectus Summary—Overview of Aspen*”), and (ii) for other general corporate purposes, including, but not limited to, working capital, investments and acquisitions. The construction of Phase I of Plant 2 that is partially funded with the net proceeds from this offering will require additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete this and our other capital projects. We cannot assure you that we will be able to raise the required additional capital on attractive terms, or at all.

This expected use of our net proceeds from this offering represents our intentions based upon our current plans and business conditions. The amount and timing of our actual expenditures may vary significantly depending on numerous factors. As a result, our management will retain broad discretion over the allocation of the net proceeds we receive from this offering. We have no current understandings, agreements or commitments for any material acquisitions or licenses of any compounds, product candidates, technology or businesses.

[Table of Contents](#)**CAPITALIZATION**

The following table presents our cash and cash equivalents and our capitalization as of September 30, 2022:

- on an actual basis; and
- on an as adjusted basis to give effect to the issuance and sale of 25,263,158 shares of common stock we are offering, after deducting the underwriting discounts and commissions and our estimated offering expenses.

This table should be read in conjunction with the other information in this prospectus supplement and the documents that are incorporated by reference, including our consolidated financial statements and related notes.

	AS OF SEPTEMBER 30, 2022	
	ACTUAL	AS ADJUSTED
	(In thousands, except share and per share data)	
Cash and cash equivalents (1)	\$ 102,398	\$ 335,656
Debt:		
Principal amount of convertible senior PIK note due 2027 (1)	\$ 105,218	\$ 105,218
Principal amount of Loan Agreement due 2025	0	0
Total debt	\$ 105,218	\$ 105,218
Stockholders' equity:		
Common stock, \$0.00001 par value per share; 125,000,000 shares authorized, 40,841,127 shares issued and outstanding, actual; 66,104,285 shares issued and outstanding as adjusted (2)	0	0
Preferred stock, \$0.00001 par value per share; 5,000,000 shares authorized, no shares issued and outstanding, actual, and as adjusted	0	0
Additional paid-in capital	800,588	1,033,846
Accumulated other comprehensive loss	0	0
Accumulated deficit	(618,182)	(618,182)
Total stockholders' equity	182,406	415,664
Total capitalization	\$ 182,406	\$ 415,664

- (1) In accordance with ASU 2020-06, the Convertible Note is accounted for as a single unit of account and consists of the principal amount plus accrued interest less debt issuance costs, net of accumulated amortization.
- (2) The number of shares of our common stock outstanding as of September 30, 2022 excludes the following:
- 3,989,342 shares of our common stock issuable upon the exercise of options outstanding as of September 30, 2022 at a weighted average exercise price of \$11.21 per share;
 - 259,766 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of September 30, 2022;
 - 365,685 shares of our common stock reserved for future issuance under the 2014 Employee, Director and Consultant Equity Incentive Plan as of September 30, 2022; and
 - 3,520,103 shares of our common stock issuable upon the conversion of the \$100.0 million in aggregate outstanding principal amount of the Convertible Note issued to the Purchaser on February 18, 2022, as amended by the Convertible Note Amendment, along with any additional shares issuable upon the conversion of accrued but unpaid interest thereon.

[Table of Contents](#)**DILUTION**

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the public offering price per share of our common stock and the net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value as of September 30, 2022 was \$182.4 million, or \$4.47 per share of our common stock, based upon 40,841,127 shares outstanding on September 30, 2022. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares outstanding as of September 30, 2022. After reflecting the sale of shares of our common stock offered by us at the public offering price of \$9.50 per share, less underwriting discounts and commissions and estimated offering expenses, our as-adjusted net tangible book value would have been approximately \$415.7 million, or approximately \$6.29 per share of common stock based upon shares outstanding. This represents an immediate increase in net tangible book value of \$1.82 per share to our existing stockholders and an immediate dilution in net tangible book value of \$3.21 per share to investors purchasing shares of our common stock in this offering. The following table illustrates this calculation on a per share basis:

Public offering price per share	\$9.50
Net tangible book value per share as of September 30, 2022	\$4.47
Increase in net tangible book value per share attributable to investors purchasing shares of our common stock in this offering	1.82
As-adjusted net tangible book value per share after this offering	6.29
Dilution per share to investors purchasing shares of our common stock in this offering	\$3.21

The number of shares of our common stock to be outstanding immediately after this offering excludes:

- 3,989,342 shares of our common stock issuable upon the exercise of options outstanding as of September 30, 2022 at a weighted average exercise price of \$11.21 per share;
- 259,766 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of September 30, 2022;
- 365,685 shares of our common stock reserved for future issuance under the 2014 Employee, Director and Consultant Equity Incentive Plan as of September 30, 2022; and
- 3,520,103 shares of our common stock issuable upon the conversion of the \$100.0 million in aggregate outstanding principal amount of the Convertible Note issued to the Purchaser on February 18, 2022, as amended by the Convertible Note Amendment, along with any additional shares issuable upon the conversion of accrued but unpaid interest thereon.

In addition, the amounts in the table above assume no exercise by the underwriters of their option to purchase additional shares of our common stock.

Investors purchasing shares of our common stock in this offering will experience further dilution upon, among other things, the future exercise of stock options, vesting of restricted stock units and conversion of some or all of the Convertible Note to the extent we deliver shares upon conversion of such Convertible Note. Furthermore, subject to the terms of our lock-up agreement with Cowen and Company, LLC and Barclays Capital Inc., as described in "Underwriting," we may choose to raise additional capital through the sale of additional securities due to market conditions or strategic considerations even if we believe we have sufficient funds on hand for our current or future operating plans. In addition, the capital projects partially financed with the net proceeds from this offering will require additional funding, which may include one or more equity, equity-linked or debt financings, in the future to complete these projects. To the extent that we raise additional equity or equity-linked capital in this manner, the issuance of such securities would likely result in further dilution to investors purchasing shares of our common stock in this offering.

[Table of Contents](#)**MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS**

The following discussion describes certain material United States federal income and estate tax considerations relating to the purchase, ownership, and disposition of shares of our common stock by a non-U.S. holder (as defined below) that acquires our common stock in this offering and holds it as a capital asset. This discussion is based on the tax laws of the United States, including the Code, U.S. Treasury regulations promulgated or proposed thereunder (“Treasury Regulations”), and administrative and judicial interpretations thereof, all as in effect on the date of this prospectus supplement. These tax laws are subject to change, possibly with retroactive effect, and subject to differing interpretations that could affect the tax consequences described herein.

For purposes of this discussion, a “non-U.S. holder” is a beneficial owner of our common stock that, for United States federal income tax purposes, is:

- a non-resident alien;
- a foreign corporation (or other entity taxable as a foreign corporation);
- an estate the income of which is not subject to United States federal income taxation regardless of its source; or
- a trust that does not have in effect a valid election under the Treasury Regulations to be treated as a United States person and either (1) no court within the United States is able to exercise primary supervision over the trust’s administration or (2) no United States person has the authority to control all substantial decisions of that trust.

This discussion does not address all aspects of United States federal income and estate taxation that may be applicable to non-U.S. holders in light of their particular circumstances or status, including, for example, financial institutions, banks, investment funds, broker-dealers or traders in securities, insurance companies, persons subject to the alternative minimum tax, partnerships or other pass-through entities, corporations that accumulate earnings to avoid U.S. federal income tax, certain United States expatriates, tax-exempt organizations, pension plans, persons in special situations, such as those that have elected to mark securities to market or that hold shares of our common stock as part of a straddle, hedge or other integrated investment, and foreign governments or agencies.

If a partnership (including any entity or arrangement treated as a partnership for United States federal income tax purposes) purchases, owns, or disposes of our common stock, the tax treatment of a person treated as a partner in the partnership for United States federal income tax purposes generally will depend on the status of the partner and the activities of the partnership. Partnerships (and other entities or arrangements so treated for United States federal income tax purposes) and their partners should consult their own tax advisors.

This discussion addresses only non-U.S. holders and does not discuss any tax considerations other than United States federal income tax and certain United States federal estate tax considerations. Prospective investors are urged to consult their own tax advisors regarding the United States federal, state, and local, and foreign tax consequences of the purchase, ownership, and disposition of our common stock, including the effect of any applicable income or estate tax treaty.

Dividends

We have never declared or paid cash dividends on our common stock. We anticipate that we will retain all earnings, if any, to support our operations and to finance the growth and development of our business for the foreseeable future.

If we do make a distribution of cash or property with respect to our common stock, any such distribution generally will constitute a dividend for United States federal income tax purposes to the extent of our current or

[Table of Contents](#)

accumulated earnings and profits, as determined under United States federal income tax principles. Subject to the discussion below under “FATCA Withholding” and “Information Reporting and Backup Withholding,” any such dividend paid to a non-U.S. holder generally will be subject to withholding tax at a 30% rate or at a lower rate under an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. In order to receive a reduced treaty withholding tax rate, a non-U.S. holder must furnish to us or our paying agent a properly executed Internal Revenue Service Form W-8BEN or Form W-8BEN-E (or other applicable form) prior to payment of the dividend, certifying under penalties of perjury that the non-U.S. holder is entitled to a reduction in withholding under an applicable income tax treaty. A non-U.S. holder that holds our common stock through a financial institution or other agent will be required to provide appropriate documentation to the financial institution or other agent, which then will be required to provide certification to us or our paying agent either directly or through other intermediaries. A non-U.S. holder that is eligible for a reduced rate of withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by timely filing a refund claim with the Internal Revenue Service.

A non-U.S. holder is exempt from the withholding tax described above if the dividend is “effectively connected” with the conduct of a trade or business in the United States of the non-U.S. holder (and, if an applicable income tax treaty so provides, attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States) and the non-U.S. holder furnishes to us or our paying agent an Internal Revenue Service Form W-8ECI (or applicable successor form), certifying under penalties of perjury that the dividend is effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States (and, if an applicable income tax treaty so provides, attributable to a permanent establishment or fixed base maintained in the United States). “Effectively connected” dividends will generally be subject to United States federal income tax at the rates that also apply to U.S. persons. A corporate non-U.S. holder may, under certain circumstances, be subject to an additional branch profits tax at a 30% rate (or at a lower rate under an applicable income tax treaty) with respect to its “effectively connected” dividends.

Any distribution in excess of our current or accumulated earnings and profits will be treated, first, as a tax-free return of the non-U.S. holder’s capital, up to the holder’s adjusted tax basis in shares of our common stock, and thereafter, as capital gain subject to the tax treatment described below in “Gain on Sale, Exchange or Other Taxable Disposition”.

Gain on Sale, Exchange or Other Taxable Disposition

Subject to the discussion below under “FATCA Withholding” and “Information Reporting and Backup Withholding,” a non-U.S. holder generally will not be subject to United States federal income tax or withholding tax on gain realized upon a sale, exchange or other taxable disposition of shares of our common stock (including a redemption, but only if the redemption would be treated as a sale or exchange rather than a distribution for United States federal income tax purposes) unless:

- the gain is “effectively connected” with the conduct of a trade or business of the non-U.S. holder in the United States (and, if required by an applicable income tax treaty, attributable to a permanent establishment or fixed base maintained in the United States), in which case the non-U.S. holder generally will be subject to United States federal income tax on a net income basis with respect to such gain in the same manner as if such holder were a resident of the United States and, if the non-U.S. holder is a corporation for United States federal income tax purposes, may be subject to an additional “branch profits tax” at a 30% rate (or at a lower rate under an applicable income tax treaty);
- the non-U.S. holder is an individual who is present in the United States for 183 or more days in the taxable year of the disposition and meets certain other conditions, in which case the non-U.S. holder generally will be subject to United States federal income tax at a 30% rate (or at a lower rate under an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S.-source capital losses for the year; or

Table of Contents

- we are or have been a “United States real property holding corporation” (“USRPHC”) at any time within the shorter of the five-year period preceding the disposition and the non-U.S. holder’s holding period for our common stock (the “relevant period”) and the non-U.S. holder (i) disposes of our common stock during a calendar year when our common stock is no longer regularly traded on an established securities market or (ii) owned (directly, indirectly, and constructively) more than 5% of our common stock at any time during the relevant period, in which case such a non-U.S. holder will be subject to tax on the gain on the disposition of shares of our common stock generally as if the gain were effectively connected with the conduct of a trade or business in the United States, except that the “branch profits tax” will not apply. We believe we currently are not, and we do not anticipate becoming, a USRPHC for United States federal income tax purposes. However, such determination is factual in nature and subject to change and no assurance can be provided as to whether we will be a “USRPHC” for U.S. federal income tax purposes in the future. Generally, a corporation is a USRPHC only if the fair market value of its United States real property interests (as defined in the Code) equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business.

FATCA Withholding

Sections 1471 through 1474 of the Code and the regulations issued thereunder (commonly referred to as the Foreign Account Tax Compliance Act (“FATCA”)) impose a 30% withholding tax on dividends paid on our common stock to, and (subject to the proposed Treasury Regulations discussed below) the gross proceeds derived from the sale or other disposition of our common stock by, a foreign entity if the foreign entity is:

- a “foreign financial institution” (as defined under FATCA) that does not furnish proper documentation, typically on Internal Revenue Service Form W-8BEN-E, evidencing either (i) an exemption from FATCA withholding or (ii) its compliance (or deemed compliance) with specified due diligence, reporting, withholding and certification obligations under FATCA or (iii) residence in a jurisdiction that has entered into an intergovernmental agreement with the United States relating to FATCA and compliance with the diligence and reporting requirements of the intergovernmental agreement and local implementing rules; or
- a “non-financial foreign entity” (as defined under FATCA) that does not provide sufficient documentation, typically on Internal Revenue Service Form W-8BEN-E, evidencing either (i) an exemption from FATCA or (ii) adequate information regarding substantial United States beneficial owners of such entity (if any).

Withholding under FATCA generally applies to payments of dividends on our common stock and to payments of gross proceeds from a sale or other disposition of our common stock. Withholding agents may, however, rely on proposed Treasury Regulations that would no longer require FATCA withholding on payments of gross proceeds.

A withholding agent such as a broker, and not us, will determine whether or not to implement gross proceeds FATCA withholding.

Holders of our common stock should consult their own tax advisors regarding these requirements and whether they may be relevant to their ownership and disposition of the common stock.

Under certain circumstances, a non-U.S. holder will be eligible for refunds or credits of withholding taxes imposed under FATCA by filing a United States federal income tax return. Prospective investors should consult their tax advisors regarding the effect of FATCA on their ownership and disposition of our common stock.

Information Reporting and Backup Withholding

Except as described below, a non-U.S. holder generally will be exempt from backup withholding and information reporting requirements with respect to dividend payments and the payment of the proceeds from the sale of

[Table of Contents](#)

shares of our common stock effected at a United States office of a broker, as long as the payor or broker does not have actual knowledge or reason to know that the holder is a United States person, and the holder has furnished to the payor or broker:

- a valid Internal Revenue Service Form W-8BEN or Form W-8BEN-E on which the non-U.S. holder certifies, under penalties of perjury, that it is a non-United States person; or
- other documentation upon which it may rely to treat the payments as made to a non-United States person in accordance with Treasury Regulations, or the non-U.S. holder otherwise establishes an exemption.

However, we must report annually to the Internal Revenue Service and to non-U.S. holders the amount of dividends paid to non-U.S. holders and the tax withheld with respect to such dividends, regardless of whether withholding was required. Copies of the information returns reporting such dividends and withholding may also be made available to the tax authorities in the country in which the respective non-U.S. holder resides under the provisions of an applicable income tax treaty.

Payment of the proceeds from the sale of our common stock effected at a foreign office of a broker generally will not be subject to information reporting or backup withholding. However, a sale of our common stock by a non-U.S. holder that is effected at a foreign office of a broker will be subject to information reporting and backup withholding if:

- the proceeds are transferred to an account maintained by the non-U.S. holder in the United States;
- the payment of proceeds or the confirmation of the sale is mailed to the non-U.S. holder at a United States address; or
- the sale has some other specified connection with the United States as provided in the Treasury Regulations,

unless the broker does not have actual knowledge or reason to know that the holder is a United States person and the documentation requirements described above are met or the non-U.S. holder otherwise establishes an exemption.

In addition, a sale of shares of our common stock will be subject to information reporting if it is effected at a foreign office of a broker that is:

- a United States person;
- a “controlled foreign corporation” for United States federal income tax purposes;
- a foreign person 50% or more of whose gross income is effectively connected with the conduct of a United States trade or business for a specified three-year period; or
- a foreign partnership, if at any time during its tax year (a) one or more of its partners are “U.S. persons”, as defined in the Treasury Regulations, who in the aggregate hold more than 50% of the income or capital interest in the partnership, or (b) such foreign partnership is engaged in the conduct of a trade or business in the United States,

unless the broker does not have actual knowledge or reason to know that the holder is a United States person and the documentation requirements described above are met or an exemption is otherwise established. Backup withholding will apply if the sale is subject to information reporting and the broker has actual knowledge that the holder is a United States person.

Backup withholding is not an additional tax. A non-U.S. holder generally may obtain a refund of any amounts withheld under the backup withholding rules that exceed the non-U.S. holder’s income tax liability by filing a refund claim with the Internal Revenue Service.

[Table of Contents](#)**Federal Estate Taxes**

The estates of nonresident alien decedents generally are subject to United States federal estate tax on property with a United States situs. Because we are a United States corporation, our common stock will be United States situs property and therefore will be included in the taxable estate of a nonresident alien decedent at the time of the decedent's death, unless an applicable estate tax treaty between the United States and the decedent's country of residence provides otherwise. An estate tax credit is available to reduce the net tax liability of a nonresident alien's estate, but the estate tax credit for a nonresident alien is generally much smaller than the applicable credit for computing the estate tax of a United States resident. Nonresident aliens should consult their personal tax advisors regarding the United States federal estate tax consequences of owning our common stock.

S-29

[Table of Contents](#)**UNDERWRITING**

We and the underwriters for the offering named below have entered into an underwriting agreement with respect to the common stock being offered. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally and not jointly agreed to purchase from us the number of shares of our common stock set forth opposite its name below. Cowen and Company, LLC (“Cowen”) and Barclays Capital Inc. (“Barclays”) are the representatives of the underwriters.

<u>Underwriter</u>	<u>Number of Shares</u>
Cowen and Company, LLC	8,524,590
Barclays Capital Inc.	8,524,590
Piper Sandler & Co.	3,520,276
Oppenheimer & Co. Inc.	2,346,850
B. Riley Securities, Inc.	1,173,426
Craig-Hallum Capital Group LLC	1,173,426
Total	25,263,158

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent and that the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the option to purchase additional shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Option to Purchase Additional Shares. We have granted to the underwriters an option to purchase up to 3,789,473 additional shares of common stock at the public offering price, less the underwriting discounts and commissions. This option is exercisable for a period of 30 days. To the extent that the underwriters exercise this option, the underwriters will purchase additional shares from us in approximately the same proportion as shown in the table above.

Discounts and Commissions. The following table shows the public offering price, underwriting discounts and commissions and proceeds, before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase additional shares.

We estimate that the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$0.3 million and are payable by us. We have agreed to reimburse the underwriters for up to \$5,000 for their FINRA counsel fee.

	<u>Total</u>		
	<u>Per Share</u>	<u>Without Option</u>	<u>With Option</u>
Public offering price	\$9.500000	\$240,000,001	\$275,999,995
Underwriting discounts and commissions (1)	\$0.434625(2)	\$ 6,405,000(3)	\$ 8,052,000(3)
Proceeds, before expenses, to us	\$9.065375	\$233,595,001(4)	\$267,947,995(4)

(1) We have agreed to reimburse the underwriters for certain expenses in connection with this offering.

Table of Contents

- (2) Reflects underwriting discounts and commissions relating to the shares other than those purchased by Koch and/or certain of its affiliates (as described below). The underwriters will not receive any discounts or commissions relating to any shares purchased by Koch and/or certain of its affiliates.
- (3) Reflects total underwriting commissions and discounts on shares purchased by investors other than Koch and/or certain of its affiliates.
- (4) The proceeds, before expenses, to us include the proceeds from shares purchased by Koch and/or certain of its affiliates, for which the underwriters will not receive any discount or commissions, at the public offering price and the proceeds from shares sold to the public, at a price equal to the public offering price less the underwriting discounts and commissions.

The underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus supplement. The underwriters may offer the shares of common stock to securities dealers at the public offering price less a concession not in excess of \$0.260775 per share. If all of the shares are not sold at the public offering price, the underwriters may change the offering price and other selling terms.

Our common stock is listed on the NYSE under the symbol "ASPN".

Stabilization. In connection with this offering, the underwriters may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.
- Overallotment transactions involve sales by the underwriters of shares of common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the option to purchase additional shares. In a naked short position, the number of shares involved is greater than the number of shares in the option to purchase additional shares. The underwriters may close out any short position by exercising their option to purchase additional shares and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the option to purchase additional shares. If the underwriters sell more shares than could be covered by exercise of the option to purchase additional shares and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the common stock originally sold by that syndicate member is purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or

Table of Contents

prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the NYSE, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time without notice.

Lock-Up Agreements. Pursuant to certain “lock-up” agreements, we, our executive officers and directors and Koch and certain of its affiliates, have agreed, subject to certain exceptions, not to and will not cause or direct any of its affiliates to offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into, or announce the intention to enter into any swap, hedge or similar agreement or arrangement (including, without limitation, the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) that transfers, is designed to transfer or reasonably could be expected to transfer (whether by the stockholder or someone other than the stockholder) that transfers, in whole or in part, directly or indirectly the economic consequence of ownership of, directly or indirectly, or make any demand or request or exercise any right with respect to the registration of, or file with the SEC a registration statement under the Securities Act relating to, any common stock or securities convertible into or exchangeable or exercisable for any common stock without the prior written consent of Cowen and Barclays for a period of 60 days after the date of the pricing of the offering.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. The exceptions permit us, among other things and subject to restrictions, to: (a) issue common stock or options pursuant to employee benefit plans, (b) issue common stock upon exercise of outstanding options or warrants, (c) issue securities in connection with acquisitions or similar transactions, or (d) adopt a new equity incentive plan and file registration statements on Form S-8. The exceptions permit parties to the “lock-up” agreements, among other things and subject to restrictions, to: (a) make certain gifts, (b) if the party is a corporation, partnership, limited liability company or other business entity, make transfers to any stockholders, partners, members of, or owners of similar equity interests in, the party, or to an affiliate of the party, if such transfer is not for value, (c) if the party is a corporation, partnership, limited liability company or other business entity, make transfers in connection with the sale or transfer of all of the party’s capital stock, partnership interests, membership interests or other similar equity interests, as the case may be, or all or substantially all of the party’s assets, in any such case not undertaken for the purpose of avoiding the restrictions imposed by the “lock-up” agreement, (d) engage in transactions relating to shares of common stock or other securities acquired in the open market after the completion of the offering, (e) make transfers pursuant to a court order or settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union, (f) establish a contract, instruction or plan that satisfies all of the requirements of Rule 10b5-1 under the Exchange Act, (g) make transfers or commitments to transfer pursuant to a merger, consolidation, tender offer or other similar transaction that are approved by the board of directors of the company involving a change of control or reverse merger and (h) make transfers of shares of common stock or securities convertible into, or exercisable or exchangeable for, shares of common stock to the company in connection with the termination of the undersigned’s employment with the company. In addition, the lock-up provision will not restrict broker-dealers from engaging in market making and similar activities conducted in the ordinary course of their business.

Cowen and Barclays, in their sole discretion, may release our common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

Selling Restrictions

Canada. The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements or the accompanying prospectus of applicable securities laws.

Table of Contents

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Switzerland. The securities will not be offered, directly or indirectly, to the public in Switzerland and this prospectus does not constitute a public offering prospectus as that term is understood pursuant to article 652a or 1156 of the Swiss Federal Code of Obligations.

European Economic Area. In relation to each Member State of the European Economic Area (each, a "Member State"), no shares have been offered or will be offered pursuant to the offering to the public in that Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation, except that shares may be offered to the public in that Member State at any time:

A. to any legal entity which is a qualified investor as defined under Article 2 the Prospectus Regulation;

B. to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

C. in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of the shares shall require us or any of the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

United Kingdom. No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the United Kingdom at any time:

A. to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;

B. to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or

C. in any other circumstances falling within Section 86 of the FSMA,

provided that no such offer of the shares shall require the Issuer or any Manager to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares in the United

Table of Contents

Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares and the expression “UK Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Hong Kong. The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the “SFO”) of Hong Kong and any rules made thereunder; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong) (the “CO”), or which do not constitute an offer to the public within the meaning of the CO. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made thereunder.

Singapore. Each underwriter has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each underwriter has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

A. to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA;

B. to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or

C. otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

A. a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

b. a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (however described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(i) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(ii) where no consideration is or will be given for the transfer;

Table of Contents

(iii) where the transfer is by operation of law;

(iv) as specified in Section 276(7) of the SFA; or

(v) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification — In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares, we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), that the shares are “prescribed capital markets products” (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Israel. In the State of Israel this prospectus supplement shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 – 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the “Addressed Investors”); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 – 1968, subject to certain conditions (the “Qualified Investors”). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 – 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 – 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 – 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 – 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 – 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor’s name, address and passport number or Israeli identification number.

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriters and their respective affiliates, with a view to the final placement of the securities as contemplated in this document.

Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of shares on our behalf or on behalf of the underwriters.

Electronic Offer, Sale and Distribution of Shares. A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group

Table of Contents

members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees. In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer or its affiliates. If the underwriters and certain of their affiliates have a lending relationship with us, certain of those underwriters or their affiliates routinely hedge, and certain other of those underwriters and their affiliates may hedge, their credit exposure to us consistent with their customary risk management policies. Typically, the underwriters and certain of their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the shares of common stock offered hereby. Any such credit default swaps or short positions could adversely affect future trading prices of the shares of common stock offered hereby. The underwriters and certain of their affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

[Table of Contents](#)**LEGAL MATTERS**

The validity of the common stock being offered hereby will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C., Boston, Massachusetts. Certain legal matters relating to the common stock offering will be passed upon for the underwriters by Blank Rome LLP, New York, New York.

EXPERTS

The consolidated financial statements of Aspen Aerogels, Inc. as of December 31, 2021 and 2020 and for each of the years in the three-year period ended December 31, 2021, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2021 have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Exchange Act, and in accordance therewith, file periodic reports, proxy statements and other information with the SEC. SEC filings are available at the SEC's web site at <http://www.sec.gov>.

This prospectus supplement is only part of a registration statement that we have filed with the SEC under the Securities Act, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus supplement and the accompanying prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document.

We also maintain a website at www.aerogel.com, through which you can access our SEC filings. The information set forth on our website is not part of this prospectus.

[Table of Contents](#)**INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE**

The SEC allows us to “incorporate by reference” information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act with the SEC with respect to the securities we may offer pursuant to this prospectus supplement. This prospectus supplement omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus supplement. Statements in this prospectus supplement regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete, and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed below in “Where You Can Find More Information”. The documents we are incorporating by reference are:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021, filed with the SEC on March 1, 2022 (including the portions of our definitive proxy statement on Schedule 14A filed with the SEC on [April 21, 2022](#) and [April 29, 2022](#) that are incorporated by reference therein);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2022, June 30, 2022, and September 30, 2022 filed with the SEC on [May 10, 2022](#), [August 4, 2022](#), and [November 7, 2022](#), respectively;
- our Current Reports on Form 8-K filed with the SEC on [January 3, 2022](#), [January 4, 2022](#), [January 13, 2022](#) (Item 5.02 only), [February 17, 2022](#) (for the reporting date of February 15, 2022), [February 18, 2022](#), [March 16, 2022](#), [March 29, 2022](#), [April 1, 2022](#), [April 29, 2022](#), [June 3, 2022](#), [June 6, 2022](#) (excluding Item 7.01), [June 24, 2022](#), [August 2, 2022](#), [November 2, 2022](#), and [November 29, 2022](#) (in each case, except for information contained therein which is furnished rather than filed);
- the description of our common stock included in our registration statement on [Form 8-A](#), filed with the SEC on June 6, 2014, as updated or amended in any amendment or report filed for such purpose; and
- all documents filed after the date of this prospectus supplement and prior to the termination of the offering hereunder pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act.

Information in this prospectus supplement supersedes related information in the documents listed above, and information in subsequently filed documents supersedes related information in each of this prospectus supplement and the incorporated documents.

We will promptly provide, without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus supplement, other than the exhibits, unless the exhibits are specifically incorporated by reference. Requests should be directed to:

Aspen Aerogels, Inc.
Attn: Investor Relations,
30 Forbes Road, Building B,
Northborough, Massachusetts, 01532
Telephone: (508) 691-1111

You may also access these documents, free of charge on the SEC’s website at www.sec.gov or on our website at www.aerogel.com. Information contained on our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus, and you should not consider any information on, or that can be accessed from, our website as part of this prospectus or the accompanying prospectus.

[Table of Contents](#)

You should rely only on the information incorporated by reference or provided in this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus supplement, and the accompanying prospectus or the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus supplement or those documents.

S-39

[Table of Contents](#)

PROSPECTUS

Aspen Aerogels, Inc.



COMMON STOCK PREFERRED STOCK DEBT SECURITIES WARRANTS RIGHTS UNITS

We may offer and sell securities from time to time in one or more offerings. This prospectus will allow us to issue, from time to time at prices and on terms to be determined at or prior to the time of the offering, any combination of the securities described in this prospectus, either individually or in units. We may also offer common stock or preferred stock upon conversion of or exchange for the debt securities; common stock upon conversion of or exchange for the preferred stock; or common stock, preferred stock or debt securities upon the exercise of warrants or rights.

This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide you with the specific terms of any offering in one or more supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any prospectus supplement, as well as any documents incorporated by reference into this prospectus or any prospectus supplement, carefully before you invest.

Our securities may be sold directly by us to you, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section titled "Plan of Distribution" in this prospectus and in the applicable prospectus supplement. If any underwriters or agents are involved in the sale of our securities with respect to which this prospectus is being delivered, the names of such underwriters or agents and any applicable fees, commissions or 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 that we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on the New York Stock Exchange, or NYSE, under the symbol "ASPN." On March 15, 2022, the last reported sale price of our common stock was \$28.15 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on NYSE or any securities market or other securities exchange of the securities covered by the prospectus supplement. Prospective purchasers of our securities are urged to obtain current information as to the market prices of our securities, where applicable.

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described on page 5 of this prospectus under the caption "[Risk Factors](#)." We may include specific risk factors in supplements to this prospectus under the caption "Risk Factors." This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is March 16, 2022.

[Table of Contents](#)**TABLE OF CONTENTS**

ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	2
RISK FACTORS	5
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	6
USE OF PROCEEDS	10
PLAN OF DISTRIBUTION	11
DESCRIPTION OF COMMON STOCK	13
DESCRIPTION OF PREFERRED STOCK	14
DESCRIPTION OF DEBT SECURITIES	15
DESCRIPTION OF WARRANTS	21
DESCRIPTION OF RIGHTS	23
DESCRIPTION OF UNITS	25
CERTAIN PROVISIONS OF DELAWARE LAW AND OF OUR AMENDED AND RESTATED CERTIFICATE OF INCORPORATION AND RESTATED BYLAWS	27
LEGAL MATTERS	30
EXPERTS	30
WHERE YOU CAN FIND MORE INFORMATION	30
INCORPORATION OF DOCUMENTS BY REFERENCE	31

[Table of Contents](#)**ABOUT THIS PROSPECTUS**

This prospectus is part of an automatic shelf registration statement that we filed with the Securities and Exchange Commission, or SEC, as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, which we refer to as the Securities Act, utilizing an automatic “shelf” registration process. Under this shelf registration process, we may from time to time offer shares of our common stock and preferred stock, various series of debt securities and/or warrants or rights to purchase any of such securities, either individually or in units, in one or more offerings, at prices and on terms to be set forth in one or more supplements to this prospectus at the time of an offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits and the prospectus supplement, as applicable. The prospectus supplement may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement will offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, includes all material information relating to the offering of securities under this prospectus. You should carefully read this prospectus, the applicable prospectus supplement, the information and documents incorporated herein by reference and the additional information under the headings “Where You Can Find More Information” and “Incorporation of Documents by Reference” before making an investment decision.

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus or any prospectus supplement. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus or any prospectus supplement were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus may not be used to consummate sales of our securities unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

Unless the context otherwise requires, “Aspen Aerogels,” “the Company,” “we,” “us,” “our” and similar terms refer to Aspen Aerogels, Inc. and its subsidiaries.

[Table of Contents](#)**PROSPECTUS SUMMARY**

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC or included in any applicable prospectus supplement. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth in any prospectus supplements and in our most recent annual and quarterly filings with the SEC, as well as other information in this prospectus and any prospectus supplements and the documents incorporated by reference herein or therein, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

Overview of Aspen

We are an aerogel technology company that designs, develops and manufactures innovative, high-performance aerogel materials used primarily in the energy infrastructure, building materials and electric vehicle markets. We have provided high-performance aerogel insulation to the energy infrastructure and sustainable building materials markets for more than a decade. We have also recently introduced a line of high-potential aerogel thermal barriers for use in battery packs in the electric vehicle market and other energy storage systems. In addition, we are developing applications for our aerogel technology in the battery materials and a number of other high-potential markets. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our end-user customers select our products where thermal performance is critical and to save money, improve resource efficiency, enhance sustainability, preserve operating assets, and protect workers.

Our technologically advanced insulation products are principally targeted at the estimated \$3.9 billion annual global market for energy infrastructure insulation materials. Our aerogel insulation has undergone rigorous technical validation and is used by many of the world's largest oil producers and the owners and operators of refineries, petrochemical plants, liquefied natural gas facilities and power generating and distribution assets, such as ExxonMobil, Reliance Industries, PTT LNG, and Royal Dutch Shell. Our products replace traditional insulation in existing facilities during regular maintenance, upgrades and capacity expansions. In addition, our aerogel products are increasingly being specified for use in new-build energy infrastructure facilities.

We introduced our two key aerogel insulation product lines for the energy infrastructure market, Pyrogel® and Cryogel®, in 2008. Pyrogel and Cryogel have undergone rigorous technical validation by industry-leading end-users and achieved significant market adoption. We introduced our aerogel insulation product for the building materials market, Spaceloft®, in 2006. We believe that our long-term record of success positions us for future growth and continued gain in market share in the energy infrastructure and building materials markets.

We have grown our business by forming technical and commercial relationships with industry leaders, which has allowed us to optimize our products to meet the particular demands of targeted market sectors. We have benefited from our technical and commercial relationships with ExxonMobil in the oil refinery and petrochemical sector and with TechnipFMC in the offshore oil sector. We will continue our strategy of working with innovative companies to target and penetrate additional opportunities in the energy infrastructure and sustainable building materials markets.

We are also actively developing a number of promising aerogel products and technologies for the electric vehicle market. We have developed and are commercializing our proprietary line of PyroThin® thermal barriers for use in battery packs of electric vehicles. Our PyroThin product is an ultra-thin, lightweight and flexible thermal barrier designed with other functional layers to impede the propagation of thermal runaway across multiple

[Table of Contents](#)

lithium-ion battery system architectures. Our thermal barrier technology is designed to offer a unique combination of thermal management, mechanical performance and fire protection properties. These properties enable electric vehicle manufacturers to achieve critical battery performance and safety goals.

In addition, we are seeking to leverage our patented carbon aerogel technology to develop industry-leading battery materials for use in lithium-ion battery cells. These battery materials have the potential to increase the energy density of the battery cells, thus enabling an increase in the driving range of electric vehicles.

Additional Information

For additional information related to our business and operations, please refer to the reports incorporated herein by reference, including our Annual Report on Form 10-K for the year ended December 31, 2021 and subsequent reports filed with the SEC, as described under the caption “Incorporation of Documents by Reference” on page 31 of this prospectus.

Our Corporate Information

Our principal office is located at 30 Forbes Road, Building B, Northborough, Massachusetts 01532, and our telephone number is (508) 691-1111. Our website address is <https://www.aerogel.com>. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available free of charge through the investor relations page of our internet website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

All trademarks appearing in this prospectus are the property of their respective holders. Use or display by us of other parties’ trademarks, or products in this prospectus is not intended to, and does not, imply a relationship with, or endorsements or sponsorship of, us by the trademark.

Offerings Under This Prospectus

Under this prospectus, we may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants or rights to purchase any of such securities, either individually or in units, from time to time at prices and on terms to be determined by market conditions at the time of the offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion or sinking fund terms, if any;
- voting or other rights, if any; and
- conversion or exercise prices, if any, and the various factors considered in determining such price.

[Table of Contents](#)

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We may sell the securities directly to investors or to or through agents, underwriters or dealers. We, and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we offer securities through agents or underwriters, we will include in the applicable prospectus supplement:

- the names of those agents or underwriters;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the net proceeds to us.

This prospectus may not be used to consummate a sale of any securities unless it is accompanied by a prospectus supplement.

[Table of Contents](#)**RISK FACTORS**

Investing in our securities involves significant risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in Aspen Aerogels, Inc. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading “Risk Factors” in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under the heading “Risk Factors” included in our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our subsequent current reports on Form 8-K that we have filed with the SEC, all of which are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

[Table of Contents](#)**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus and the documents incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Words such as, but not limited to, “believe,” “expect,” “anticipate,” “estimate,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “targets,” “likely,” “will,” “would,” “could,” “should,” “continue,” and similar expressions or phrases, or the negative of those expressions or phrases, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus and incorporated by reference in this prospectus, we caution you that these statements are based on our projections of the future that are subject to known and unknown risks and uncertainties and other factors that may cause our actual results, level of activity, performance or achievements expressed or implied by these forward-looking statements, to differ. The sections in our periodic reports, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, entitled “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as other sections in this prospectus and the documents or reports incorporated by reference in this prospectus, discuss some of the factors that could contribute to these differences. These forward-looking statements include, among other things, statements about:

- the expected future growth of the market for our aerogel products and our continued gain in market share, in particular in the electric vehicle market, the energy infrastructure insulation market, the lithium-ion battery thermal barrier markets, and other markets we target;
- our beliefs about the competitive strengths and value propositions of our technology and our products and our ability to gain additional market share and enter into new markets based on those strengths;
- our expectation that our investment in incremental manufacturing and operating expense will sustain long-term growth in our existing markets and develop new business opportunities;
- our plans to continue to develop and optimize aerogel products for high-value applications within the sustainable building materials market and our plan to realize revenue from this market;
- our plans and expectations to partner with industry leaders in the battery and electric vehicle market or such partnerships resulting in products and technologies or otherwise resulting in meaningful financial results;
- our expectations about the size and timing of awarded business in the EV market, future revenues and profit margins, arising from our supply relationship and contract with automotive original equipment manufacturers, or OEMs, and our ability to win more business and increase revenue in the EV market;
- our pursuit of high-value opportunities for our aerogel products within different segments of the EV market, the global insulation market, including the sustainable building materials market, and our plans to leverage our aerogel technology platform to develop innovative, aerogel enhanced products for applications in new markets;
- our plans to focus additional resources to continue to grow our share of the EV market and the energy infrastructure insulation market;
- the current or future trends in the energy, energy infrastructure, chemical and refinery, LNG, sustainable building materials, EV thermal barrier, EV battery materials or other markets and the impact of these trends on our business;
- our investments in the electric vehicle market and aerogel technology platform;

Table of Contents

- our pursuit of and the expected greater adoption of our products in the LNG and power generation markets and our expectation that product revenue will be generated in large part by demand for insulation associated with scheduled plant shutdowns, or turnarounds, and other maintenance-related projects;
- our expectation that our products will be specified during the design phase in a growing number of new plant construction and capital expansion projects and our expectation that we will have an increasing percentage of our products sold for use in capital projects;
- our expectation that the growth in global energy demand and EV market will result in increased new-build and large capacity expansion projects, driving demand for our aerogel products;
- our plans to continue our strategy of working with innovative companies to target and penetrate additional market opportunities;
- our plans to develop strategic partnerships to facilitate market penetration beyond the energy infrastructure and sustainable building materials market, as well as the expected goals and priorities of such strategic partnerships;
- our belief that an adequate long-term supply of silica-precursors and other raw materials is available and that our plans to reduce reliance on precursors susceptible to significant price fluctuations will be successful;
- our belief that we can strategically increase our capacity to meet the demand or that we will be able to make such capacity increases in a timely manner;
- our expectation in our ability to implement lower cost product formulations and realize material purchasing efficiencies;
- our belief that our portfolio of patents, trade secrets and know-how present a significant barrier to potential new entrants in the production of aerogel blanket insulation;
- our expectation that we will be successful in enforcing and defending our patents against competitors and that such patents are valid and enforceable, as well as our expectations about the costs and consequences of our current or potential future patent litigation and the potential for additional patent litigation;
- our belief that our products possess strong competitive advantages over traditional insulation materials, including the superior thermal performance and the thin, easy-to-use and durable blanket form of our products;
- our belief that we can finance the construction and development of our planned second manufacturing facility in Bulloch County, Georgia with anticipated available credit, cash flows from operations, debt financings, technology licensing agreements, customer prepayments or equity financings;
- our expectations regarding the investment to open a second manufacturing facility in Georgia and the anticipated job creation as a result thereof;
- the anticipated aerogel capacity expansion as a result of the planned second manufacturing facility in Georgia and the expected commencement of production;
- our belief that our end-use customers will continue to invest in major energy infrastructure projects;
- our expectation that we will continue to sell our products in the sustainable building materials and other end markets;
- our expectations that our work with partners will accelerate the commercialization of these carbon aerogel anode materials in the electric vehicle market;
- our belief that the potential for significant technological innovation in traditional insulation materials is limited and that new high-performance materials will be required to meet evolving market requirements for energy efficient insulation systems;

Table of Contents

- our belief that our aerogel products and manufacturing processes are proprietary and that we can protect our patents, trade secrets and know-how associated therewith;
- our belief that we can continue to improve the cost efficiency of our manufacturing process, that our current expansion plans offer attractive returns on incremental invested capital, and that we will focus our development efforts on new products and next generation technology with application in new, high value market segments;
- our belief that we will have opportunities to address additional high value applications in the estimated \$3.9 billion global insulation market, and that we are well-positioned to leverage a decade's worth of research and development to design and commercialize disruptive aerogel products for a wide array of new markets;
- our belief that our products have the lowest cost on a fully-installed basis or offer significant life-cycle cost savings in energy infrastructure and certain other applications as compared to traditional insulation materials;
- our plans to continue to expand our global sales force and distribution network to support anticipated growth in customers and demand for our products and our plans to seek to promote greater enterprise-wide utilization of our products by existing end-use customers;
- our expectations and projections about future revenues, revenue growth, costs, expenses, production volumes, manufacturing productivity, gross profit, profitability, net loss, loss per share and Adjusted EBITDA, sources and uses of cash, liquidity, cash flow, capital requirements and the sufficiency of our existing cash balance and available credit;
- our expectations that most of our revenue will continue to come from a relatively small number of customers for the foreseeable future;
- our expectations of long-term revenue growth, with increasing levels of gross profit and improved cash flows from operations and our expectations that we will incur significant capital expenditures related to the expansion of our manufacturing capacity to support this expected long-term growth in demand;
- our expectation to continue to increase investment in research and development in our efforts to enhance and expand our aerogel technology platform;
- our expectations about the impact of new accounting pronouncements on our consolidated financial statements and related disclosures;
- our belief that our experienced and dedicated leadership team will provide us with a competitive advantage in the industry;
- our belief of our technological and market leadership in aerogels;
- the expected future development of new aerogel technologies; and
- our expectations about limitations of net operating losses.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this prospectus or in the documents incorporated by reference in this prospectus, particularly in the "Risk Factors" section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. For a summary of such factors, please refer to the section entitled "Risk Factors" in this prospectus, as updated and supplemented by the discussion of risks and uncertainties under "Risk Factors" contained in any supplements to this prospectus and in our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K, as well as any amendments thereto, as filed with the SEC and

Table of Contents

which are incorporated herein by reference. The information contained in this document is believed to be current as of the date of this document. We do not intend to update any of the forward-looking statements after the date of this document to conform these statements to actual results or to changes in our expectations, except as required by law.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus or in any document incorporated herein by reference might not occur. Investors are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference in this prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

[Table of Contents](#)**USE OF PROCEEDS**

Unless otherwise indicated in the applicable prospectus supplement, we intend to use any net proceeds from the sale of securities under this prospectus for other general corporate purposes, including, but not limited to, working capital, capital expenditures, repayment of any existing indebtedness, investments and acquisitions. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds, if any, we receive in connection with securities offered pursuant to this prospectus for any purpose. Pending application of the net proceeds as described above, we may initially invest the net proceeds in short-term, investment-grade, interest-bearing securities or apply them to the reduction of short-term indebtedness.

[Table of Contents](#)**PLAN OF DISTRIBUTION**

We may offer securities under this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities (1) through underwriters or dealers, (2) through agents or (3) directly to one or more purchasers, or through a combination of such methods. We may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed from time to time;
- market prices prevailing at the time of sale;
- prices related to the prevailing market prices; or
- negotiated prices.

We may directly solicit offers to purchase the securities being offered by this prospectus. We may also designate agents to solicit offers to purchase the securities from time to time, and may enter into arrangements for "at-the-market," equity line or similar transactions. We will name in a prospectus supplement any underwriter or agent involved in the offer or sale of the securities.

If we utilize a dealer in the sale of the securities being offered by this prospectus, we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If we utilize an underwriter in the sale of the securities being offered by this prospectus, we will execute an underwriting agreement with the underwriter at the time of sale, and we will provide the name of any underwriter in the prospectus supplement which the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we, or the purchasers of the securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and the underwriter may compensate those dealers in the form of discounts, concessions or commissions.

With respect to underwritten public offerings, negotiated transactions and block trades, we will provide in the applicable prospectus supplement information regarding any compensation we pay to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof.

If so indicated in the applicable prospectus supplement, we will authorize underwriters, dealers or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in each applicable prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in each applicable prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and

Table of Contents

- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

One or more firms, referred to as “remarketing firms,” may also offer or sell the securities, if a prospectus supplement so indicates, in connection with a remarketing arrangement upon their purchase. Remarketing firms will act as principals for their own accounts or as our agents. These remarketing firms will offer or sell the securities in accordance with the terms of the securities. Each prospectus supplement will identify and describe any remarketing firm and the terms of its agreement, if any, with us and will describe the remarketing firm’s compensation. Remarketing firms may be deemed to be underwriters in connection with the securities they remarket. Remarketing firms may be entitled under agreements that may be entered into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

Certain underwriters may use this prospectus and any accompanying prospectus supplement for offers and sales related to market-making transactions in the securities. These underwriters may act as principal or agent in these transactions, and the sales will be made at prices related to prevailing market prices at the time of sale. Any underwriters involved in the sale of the securities may qualify as “underwriters” within the meaning of Section 2(a)(11) of the Securities Act. In addition, the underwriters’ commissions, discounts or concessions may qualify as underwriters’ compensation under the Securities Act and the rules of the Financial Industry Regulatory Authority, Inc., or FINRA.

Shares of our common stock sold pursuant to the registration statement of which this prospectus is a part will be authorized for listing and trading on the NYSE. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the NYSE or any securities market or other securities exchange of the securities covered by the prospectus supplement. Underwriters may make a market in our common stock, but will not be obligated to do so and may discontinue any market making at any time without notice. We can make no assurance as to the liquidity of or the existence, development or maintenance of trading markets for any of the securities.

In order to facilitate the offering of the securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing the applicable security in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

The underwriters, dealers and agents may engage in other transactions with us, or perform other services for us, in the ordinary course of their business.

[Table of Contents](#)**DESCRIPTION OF COMMON STOCK**

We are authorized to issue 125,000,000 shares of common stock, par value \$0.00001 per share. On March 1, 2022, we had 33,386,880 shares of common stock outstanding and approximately 29 stockholders of record.

The following summary of certain provisions of our common stock does not purport to be complete. You should refer to our restated certificate of incorporation and our restated bylaws, both of which are included as exhibits to the registration statement of which this prospectus is a part. The summary below is also qualified by provisions of applicable law.

General

Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, and do not have cumulative voting rights. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. All shares of common stock outstanding as of the date of this prospectus and, upon issuance and sale, all shares of common stock that we may offer pursuant to this prospectus, will be fully paid and nonassessable. The holders of common stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations and after liquidation payments to holders of outstanding shares of preferred stock, if any. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of then outstanding preferred stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A., P.O. Box 30170, College Station, Texas 77842.

Stock Exchange Listing

Our common stock is listed for trading on NYSE under the symbol "ASPN."

[Table of Contents](#)**DESCRIPTION OF PREFERRED STOCK**

We are authorized to issue 5,000,000 shares of blank check preferred stock, par value \$0.00001 per share. As of the date of this prospectus, no shares of our preferred stock were outstanding or designated. The following summary of certain provisions of our preferred stock does not purport to be complete. You should refer to our restated certificate of incorporation and our restated bylaws, both of which are included as exhibits to the registration statement of which this prospectus is a part. The summary below is also qualified by provisions of applicable law.

General

Our board of directors has the authority, without further stockholder authorization, to issue from time to time up to 5,000,000 shares of preferred stock in one or more series and to fix the terms, limitations, voting rights, relative rights and preferences and variations of each series. If we issue preferred stock in the future, such preferred stock would have priority over common stock with respect to dividends and other distributions, including the distribution of assets upon liquidation. The issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock and could have the effect of delaying, deterring or preventing a change of control of us or an unsolicited acquisition proposal.

If we offer a specific series of preferred stock under this prospectus, we will describe the terms of the preferred stock in the prospectus supplement for such offering and will file a copy of the certificate establishing the terms of the preferred stock with the SEC. To the extent required, this description will include:

- the title and stated value;
- the number of shares offered, the liquidation preference, if any, per share and the purchase price;
- the dividend rate(s), period(s) and/or payment date(s), or method(s) of calculation for such dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption, if applicable;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price (or how it will be calculated) and 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 exchange period;
- voting rights, if any, of the preferred stock;
- a discussion of any material and/or special U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of the affairs of the Company; and
- any material limitations on issuance of any class or series of preferred stock ranking pari passu with or senior to the series of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of the Company.

Transfer Agent and Registrar

The transfer agent and registrar for our preferred stock will be set forth in the applicable prospectus supplement.

[Table of Contents](#)**DESCRIPTION OF DEBT SECURITIES**

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future debt securities we may offer pursuant to this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. If we so indicate in a prospectus supplement, the terms of any debt securities offered under such prospectus supplement may differ from the terms we describe below, and to the extent the terms set forth in a prospectus supplement differ from the terms described below, the terms set forth in the prospectus supplement shall control.

We may sell from time to time, in one or more offerings under this prospectus, debt securities, which may be senior or subordinated. We will issue any such senior debt securities under a senior indenture that we will enter into with a trustee to be named in the senior indenture. We will issue any such subordinated debt securities under a subordinated indenture, which we will enter into with a trustee to be named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part. We use the term “indentures” to refer to either the senior indenture or the subordinated indenture, as applicable. The indentures will be qualified under the Trust Indenture Act of 1939, as in effect on the date of the indenture. We use the term “debenture trustee” to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities.

General

Each indenture provides that debt securities may be issued from time to time in one or more series and may be denominated and payable in foreign currencies or units based on or relating to foreign currencies. Neither indenture limits the amount of debt securities that may be issued thereunder. Each indenture provides that the specific terms of any series of debt securities shall be set forth in, or determined pursuant to, an authorizing resolution and/or a supplemental indenture, if any, relating to such series.

We will describe in each prospectus supplement the following terms relating to a series of debt securities:

- the title or designation;
- the aggregate principal amount and any limit on the amount that may be issued;
- the currency or units based on or relating to currencies in which debt securities of such series are denominated and the currency or units in which principal or interest or both will or may be payable;
- whether we will issue the series of debt securities in global form, the terms of any global securities and who the depository will be;
- the maturity date and the date or dates on which principal will be payable;
- the interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the date or dates interest will be payable and the 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 or places where payments will be payable;

[Table of Contents](#)

- 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 redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities;
- whether the indenture will restrict our ability to pay dividends, or will require us to maintain any asset ratios or reserves;
- whether we will be restricted from incurring any additional indebtedness;
- a discussion of any material or special U.S. federal income tax considerations applicable to a series of debt securities;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities.

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms, if any, 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.

Consolidation, Merger or Sale; No Protection in Event of a Change of Control or Highly Leveraged Transaction

The indentures do not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate.

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions that may afford holders of the debt securities protection in the event we have a change of control or in the event of a highly leveraged transaction (whether or not such transaction results in a change of control), which could adversely affect holders of debt securities.

Events of Default Under the Indenture

The following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and our failure continues for 90 days and the time for payment has not been extended or deferred;
- if we fail to pay the principal, or premium, if any, when due and the time for payment has not been extended or delayed;

Table of Contents

- if we fail to observe or perform any other covenant set forth in the debt securities of such series or the applicable indentures, other than a covenant specifically relating to and for the benefit of holders of another series of debt securities, and our failure continues for 90 days after we receive written notice from the debenture trustee or holders of not less than a majority in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur as to us.

No event of default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an event of default with respect to any other series of debt securities. The occurrence of an event of default may constitute an event of default under any bank credit agreements we may have in existence from time to time. In addition, the occurrence of certain events of default or an acceleration under the indenture may constitute an event of default under certain of our other indebtedness outstanding from time to time.

If an event of default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than a majority in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the debenture trustee if given by the holders), declare to be due and payable immediately the principal (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) of and premium and accrued and unpaid interest, if any, on all debt securities of that series. Before a judgment or decree for payment of the money due has been obtained with respect to debt securities of any series, the holders of a majority in principal amount of the outstanding debt securities of that series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) may rescind and annul the acceleration if all events of default, other than the non-payment of accelerated principal, premium, if any, and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the applicable indenture (including payments or deposits in respect of principal, premium or interest that had become due other than as a result of such acceleration). We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder previously has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least a majority in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and

Table of Contents

- the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series (or at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) other conflicting directions within 60 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the applicable debenture trustee regarding our compliance with specified covenants in the applicable indenture.

Modification of Indenture; Waiver

The debenture trustee and we may change the applicable indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series issued pursuant to such indenture.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) that is affected. However, the debenture trustee and we may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption of any debt securities;
- reducing the principal amount of discount securities payable upon acceleration of maturity;
- making the principal of or premium or interest on any debt security payable in currency other than that stated in the debt security; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment or waiver.

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. The holders of a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, premium or any interest on any debt security of that series or in respect of a covenant or provision, which cannot be modified or amended without the consent of the holder of each outstanding debt security of the series affected; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration.

[Table of Contents](#)

Discharge

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for obligations to:

- the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged with respect to a series, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, the premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange, and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange or in the applicable indenture, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

[Table of Contents](#)***Information Concerning the Debenture Trustee***

The debenture trustee, other than during the occurrence and continuance of an event of default under the applicable indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee under such indenture must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check which we will mail to the holder. Unless we otherwise indicate in a prospectus supplement, we will designate the corporate trust office of the debenture trustee in the City of New York as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any debt securities which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Subordination of Subordinated Debt Securities

Our obligations pursuant to any subordinated debt securities will be unsecured and will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The subordinated indenture does not limit the amount of senior indebtedness we may incur. It also does not limit us from issuing any other secured or unsecured debt.

[Table of Contents](#)**DESCRIPTION OF WARRANTS*****General***

We may issue warrants to purchase shares of our common stock, preferred stock and/or debt securities in one or more series together with other securities or separately, as described in the applicable prospectus supplement. Below is a description of certain general terms and provisions of the warrants that we may offer. Particular terms of the warrants will be described in the warrant agreements and the prospectus supplement relating to the warrants.

The applicable prospectus supplement will contain, where applicable, the following terms of and other information relating to the warrants:

- the specific designation and aggregate number of, and the price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the designation, amount and terms of the securities purchasable upon exercise of the warrants;
- if applicable, the exercise price for shares of our common stock and the number of shares of common stock to be received upon exercise of the warrants;
- if applicable, the exercise price for shares of our preferred stock, the number of shares of preferred stock to be received upon exercise, and a description of that series of our preferred stock;
- if applicable, the exercise price for our debt securities, the amount of debt securities to be received upon exercise, and a description of that series of debt securities;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants will be issued in fully registered form or bearer form, in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- if applicable, the date from and after which the warrants and the common stock, preferred stock and/or debt securities will be separately transferable;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the anti-dilution provisions of the warrants, if any;
- any redemption or call provisions;
- whether the warrants may be sold separately or with other securities as parts of units; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Exercise of Warrants

Each warrant will entitle the holder to purchase for cash such shares of our common stock and/or our preferred stock and/or our debt securities at such exercise price as shall be in each case be set forth in, or be determinable

[Table of Contents](#)

as set forth in, the prospectus supplement relating to the warrants offered thereby. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the prospectus supplement relating to the warrants offered thereby. After the close of business on the expiration date, unexercised warrants will become void.

The warrants may be exercised as set forth in the prospectus supplement relating to the warrants offered. Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of our common stock and/or our preferred stock and/or our debt securities purchasable upon such exercise. If less than all of the warrants represented by such warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Warrant Agent

The name and address of the warrant agent for any warrants we offer, if one is appointed, will be set forth in the applicable prospectus supplement.

Enforceability of Rights by Holders of Warrants

If we appoint a warrant agent, any warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Outstanding Warrants

As of December 31, 2021, we had no warrants outstanding.

[Table of Contents](#)**DESCRIPTION OF RIGHTS*****General***

We may issue rights to our stockholders to purchase shares of our common stock, preferred stock or the other securities described in this prospectus. We may offer rights separately or together with one or more additional rights, debt securities, preferred stock, common stock or warrants, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. Each series of rights will be issued under a separate rights agreement to be entered into between us and a bank or trust company, as rights agent. The rights agent will act solely as our agent in connection with the certificates relating to the rights of the series of certificates and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights. The following description sets forth certain general terms and provisions of the rights to which any prospectus supplement may relate. The particular terms of the rights to which any prospectus supplement may relate and the extent, if any, to which the general provisions may apply to the rights so offered will be described in the applicable prospectus supplement. To the extent that any particular terms of the rights, rights agreement or rights certificates described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement. We encourage you to read the applicable rights agreement and rights certificate for additional information before you decide whether to purchase any of our rights.

We will provide in a prospectus supplement the following terms of the rights being issued:

- the date of determining the stockholders entitled to the rights distribution;
- the aggregate number of shares of common stock, preferred stock or other securities purchasable upon exercise of the rights;
- the exercise price;
- the aggregate number of rights issued;
- whether the rights are transferrable and the date, if any, on and after which the rights may be separately transferred;
- the date on which the right to exercise the rights will commence, and the date on which the right to exercise the rights will expire;
- the method by which holders of rights will be entitled to exercise;
- the conditions to the completion of the offering, if any;
- the withdrawal, termination and cancellation provisions, if any;
- whether there are any backstop or standby purchaser or purchasers and the terms of their commitment, if any;
- whether securityholders are entitled to oversubscription rights, if any;
- any applicable material U.S. federal income tax considerations; and
- any other terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights, as applicable.

Each right will entitle the holder of rights to purchase for cash the principal amount of shares of common stock, preferred stock or other securities at the exercise price provided in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any

[Table of Contents](#)

other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of common stock, preferred stock or other securities, as applicable, purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed 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 arrangements, as described in the applicable prospectus supplement.

Rights Agent

The name and address of the rights agent for any rights we offer will be set forth in the applicable prospectus supplement.

[Table of Contents](#)**DESCRIPTION OF UNITS**

The following description, together with the additional information that we include in any applicable prospectus supplements summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

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

General

We may issue units consisting of common stock, preferred stock, one or more debt securities, warrants or rights for the purchase of common stock, preferred stock and/or debt securities in one or more series, in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each security included in the unit. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

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

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those set forth in any prospectus supplement or as described under “Description of Common Stock,” “Description of Preferred Stock,” “Description of Debt Securities,” “Description of Warrants,” and “Description of Rights” will apply to each unit, as applicable, and to any common stock, preferred stock, debt security, warrant, or right included in each unit, as applicable.

Unit Agent

The name and address of the unit agent, if any, for any units we offer will be set forth in the applicable prospectus supplement.

Issuance in Series

We may issue units in such amounts and in such numerous distinct series as we determine.

[Table of Contents](#)***Enforceability of Rights by Holders of Units***

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

[Table of Contents](#)**CERTAIN PROVISIONS OF DELAWARE LAW AND OF OUR RESTATED CERTIFICATE OF INCORPORATION AND RESTATED BYLAWS*****Anti-Takeover Provisions***

The provisions of Delaware law, our restated certificate of incorporation and our restated bylaws discussed below could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or in our best interests. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by the board of directors and to discourage certain types of transactions that may involve an actual or threatened change of our control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. Such provisions also may have the effect of preventing changes in our management.

Delaware Statutory Business Combinations Provision

We are subject to Section 203 of the Delaware General Corporation Law. This statute regulating corporate takeovers prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for three years following the date that the stockholder became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon completion 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 for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers, and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock 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 any person who, together with such person's affiliates and associates (i) owns 15% or more of a corporation's voting securities or (ii) is an affiliate or associate of a corporation and was the owner of 15% or more of the corporation's voting securities at any time within the three year period immediately preceding a business combination of the corporation governed by Section 203. 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 takeover attempts that might result in a premium over the market price for the shares of common stock held by our stockholders.

Classified Board of Directors; Removal of Directors for Cause

Our restated certificate of incorporation and restated bylaws provide that our board of directors will be divided into three classes, with the term of office of the first class to expire at the first annual meeting of stockholders following the initial classification of directors, the term of office of the second class to expire at the second annual meeting of stockholders following the initial classification of directors and the term of office of the third class to expire at the third annual meeting of stockholders following the initial classification of directors. At each annual meeting of stockholders, directors elected to succeed those directors whose terms expire will be elected

[Table of Contents](#)

for a three-year term of office. All directors elected to our classified board of directors will serve until the election and qualification of their respective successors or their earlier resignation or removal. The board of directors is authorized to create new directorships and to fill such positions so created and is permitted to specify the class to which any such new position is assigned. The person filling such position would serve for the term applicable to that class. The board of directors, or its remaining members, even if less than a quorum, is also empowered to fill vacancies on the board of directors occurring for any reason for the remainder of the term of the class of directors in which the vacancy occurred. Members of the board of directors may only be removed for cause and only by the affirmative vote of 75% of our outstanding voting stock. These provisions are likely to increase the time required for stockholders to change the composition of the board of directors. For example, at least two annual meetings will be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Advance Notice Provisions for Stockholder Proposals and Stockholder Nominations of Directors

Our restated bylaws provide that, for nominations to the board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a stockholder's notice generally must be delivered not less than 90 days nor more than 120 days prior to the anniversary of the previous year's annual meeting. For a special meeting, the notice must generally be delivered not earlier than the 90th day prior to the meeting and not later than the later of (1) the 60th day prior to the meeting or (2) the 10th day following the day on which public announcement of the meeting is first made. Detailed requirements as to the form of the notice and information required in the notice are specified in the restated bylaws. If it is determined that business was not properly brought before a meeting in accordance with our bylaw provisions, such business will not be conducted at the meeting.

Special Meetings of Stockholders

Special meetings of the stockholders may be called only by our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors, whether or not there exists any vacancies in previously authorized directorships.

No Stockholder Action by Written Consent

Our restated certificate of incorporation and restated bylaws do not permit our stockholders to act by written consent. As a result, any action to be effected by our stockholders must be effected at a duly called annual or special meeting of the stockholders.

Super Majority Stockholder Vote Required for Certain Actions

The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless the corporation's certificate of incorporation or bylaws, as the case may be, requires a greater percentage. Our restated certificate of incorporation requires the affirmative vote of the holders of at least 75% of our outstanding voting stock to amend or repeal any of the provisions discussed in this section of this prospectus titled "—Anti-Takeover Provisions" or to reduce the number of authorized shares of common stock or preferred stock. This 75% stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any preferred stock that might then be outstanding. In addition, a 75% vote is also required for any amendment to, or repeal of, our restated bylaws by the stockholders. Our restated bylaws may be amended or repealed by a simple majority vote of the board of directors.

Exclusive Forum

Our restated certificate of incorporation provides that, subject to limited exceptions, a state or federal court located within the State of Delaware will be the sole and exclusive forum for (1) any derivative action or

[Table of Contents](#)

proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our restated certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with one or more actions or proceedings described above, a court could find the choice of forum provisions contained in our restated certificate of incorporation to be inapplicable or unenforceable.

Limitation of Liability and Indemnification

Our restated certificate of incorporation and restated bylaws provide that each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director, officer or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by us to the fullest extent authorized by the Delaware General Corporation Law against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such.

Section 145 of the Delaware General Corporation Law permits a corporation to indemnify any director or officer of the corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reasonable cause to believe his or her conduct was unlawful. In a derivative action (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the Delaware Chancery Court or the court in which the action or suit was brought shall determine that such person is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

Pursuant to Section 102(b)(7) of the Delaware General Corporation Law, Article VI of our restated certificate of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

- from any breach of the director's duty of loyalty to us or our stockholders;
- from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law; and
- from any transaction from which the director derived an improper personal benefit.

[Table of Contents](#)

We have entered into indemnification agreements with our non-employee directors and with certain officers, in addition to the indemnification provided for in our restated certificate of incorporation and restated bylaws, and intend to enter into indemnification agreements with any new directors and executive officers in the future. We have purchased and intend to maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

The foregoing discussion of our restated certificate of incorporation, restated bylaws, indemnification agreements and Delaware law is not intended to be exhaustive and is qualified in its entirety by such restated certificate of incorporation, restated bylaws, indemnification agreements or law.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have 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.

LEGAL MATTERS

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, will pass upon the validity of the issuance of the securities to be offered by this prospectus.

EXPERTS

The consolidated financial statements of Aspen Aerogels, Inc. as of December 31, 2021 and 2020 and for each of the years in the three-year period ended December 31, 2021, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2021 have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and file annual, quarterly and current reports, proxy statements and other information with the SEC. SEC filings are available at the SEC's web site at <http://www.sec.gov>.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933, as amended, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document.

We also maintain a website at <http://www.aerogel.com> with information about our company and through which you may access these materials and other filings with the SEC free of charge as soon as reasonably practicable after they are filed electronically with, or furnished to, the SEC. Except for the documents incorporated by reference as described below under "Incorporation of Certain Documents by Reference", information contained on our website or any other website is not incorporated into this prospectus and does not constitute a part of this prospectus. Our website address referenced above is intended to be an inactive textual reference only and not an active hyperlink to our website.

[Table of Contents](#)**INCORPORATION OF DOCUMENTS BY REFERENCE**

The SEC allows us to “incorporate by reference” information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act of 1933, as amended, with the SEC with respect to the securities we may offer pursuant to this prospectus. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in “Where You Can Find More Information.” The documents we are incorporating by reference are:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021 that we filed with the SEC on March 1, 2022;
- The portions of our [Definitive Proxy Statement](#) on Schedule 14A filed with the SEC on April 19, 2021 that are deemed “filed” with the SEC under the Exchange Act;
- Our Current Reports on Form 8-K filed [January 3, 2022](#), [January 4, 2022](#), [January 13, 2022](#), [February 17, 2022](#), and [February 18, 2022](#); and
- The description of our common stock contained in our registration statement on Form 8-A12B filed [June 6, 2014](#), including any other amendments or reports filed for the purpose of updating such description (other than any portion of such filings that are furnished under applicable SEC rules rather than filed).

We also incorporate by reference all documents we subsequently file with the SEC (other than information furnished pursuant to Item 2.02 or Item 7.01 of Form 8-K or as otherwise permitted by SEC rules) pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the initial filing of the registration statement of which this prospectus is a part (including prior to the effectiveness of the registration statement) and prior to the termination of the offering.

This prospectus is part of a registration statement on Form S-3 that we have filed with the SEC relating to the securities. As permitted by SEC rules, this prospectus does not contain all of the information included in the registration statement and the accompanying exhibits and schedules we file with the SEC. We have filed certain legal documents that control the terms of the Common Stock offered by this prospectus as exhibits to the registration statement. We may file certain other legal documents that control the terms of the Common Stock offered by this prospectus as exhibits to reports we file with the SEC. You may refer to the registration statement and the exhibits and schedules for more information about us and our securities. The registration statement and exhibits and schedules are also available through the SEC’s website at www.sec.gov.

We will provide, without charge and upon oral or written request, to each person, including any beneficial owner, to whom a copy of this prospectus has been delivered, a copy of any of the documents referred to above as being incorporated by reference into this prospectus but not delivered with it. You may obtain a copy of these filings, at no cost, by writing or calling us at Aspen Aerogels, Inc., Attn: Investor Relations, 30 Forbes Road, Building B, Northborough, MA 01532, (508) 691-1111. Exhibits to the filings will not be provided, however, unless those exhibits have been specifically incorporated by reference in this prospectus.

[Table of Contents](#)

25,263,158 shares



Common Stock

PROSPECTUS SUPPLEMENT

Joint Book-running Managers

Cowen

Barclays

Book-running Managers

Piper Sandler

Oppenheimer & Co.

Co-Managers

B. Riley Securities

Craig-Hallum

November 29, 2022
