

PROSPECTUS SUPPLEMENT
(To Prospectus Dated November 7, 2022)

Ascent Solar Technologies, Inc.

**Up to \$4,344,000
Common Stock**

We have entered into an at the market offering agreement (the “Offering Agreement”), dated May 16, 2024, with H.C. Wainwright & Co., LLC, as sales agent (the “Sales Agent” or “Wainwright”), relating to the sale of our common stock, par value \$0.0001 per share, offered by this prospectus supplement and the accompanying base prospectus. In accordance with the terms of the Offering Agreement and this prospectus supplement and the accompanying base prospectus, we may offer and sell shares of our common stock having an aggregate offering price of up to \$4,344,000 from time to time through Wainwright acting as our sales agent.

Sales of our common stock, if any, under this prospectus supplement and the accompanying base prospectus may be made by any method permitted by law deemed to be “at-the-market” offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended (the “Securities Act”), including, without limitation, sales made directly on or through the Nasdaq Capital Market (“Nasdaq”), the existing trading market for our common stock, or any other existing trading market in the United States for our common stock, sales made to or through a market maker other than on an exchange or otherwise, directly to the Sales Agent as principal in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or in any other method permitted by law. If we and Wainwright agree on any method of distribution other than sales of shares of our common stock on Nasdaq or another existing trading market in the United States at market prices, we will file a further prospectus supplement providing all information about such offering as required by Rule 424(b) under the Securities Act. Wainwright is not required to sell any specific number or dollar amount of shares, but will act as a sales agent and use commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between Wainwright and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement. We provide more information about how the shares of common stock will be sold in the section entitled “Plan of Distribution.”

Wainwright will be entitled to compensation at a fixed cash commission rate of 3.0% of the gross sales price of the shares sold by it under the Offering Agreement. In connection with the sale of common stock on our behalf, Wainwright will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Wainwright will be deemed to be underwriting commissions or discounts. We provide more information about our compensation arrangements with the Sales Agent in the section entitled “Plan of Distribution.” We have also agreed to provide indemnification and contribution to Wainwright with respect to certain liabilities, including liabilities under the Securities Act. This offering pursuant to this prospectus supplement will terminate upon the termination by us or Wainwright of the Offering Agreement pursuant to its terms.

Our common stock is listed on Nasdaq under the symbol “ASTI.” On May 22, 2024, the last reported sale price of our common stock on Nasdaq was \$0.1314 per share.

As of the date of this prospectus supplement, the aggregate market value of our outstanding common stock held by non-affiliates, or our public float, was approximately \$25,681,229 based on a total number of 65,394,126 shares of common stock outstanding, of which 65,164,246 shares of common stock were held by non-affiliates, at a price of \$0.3941 per share, the closing sale price of our common stock on April 1, 2024, which is the highest closing price of our common stock on Nasdaq within the prior 60 days. During the prior 12-calendar-month period that ends on, and includes, the date of this prospectus supplement, we have sold \$4,216,209 of shares of Common Stock pursuant to General Instruction IB.6 of Form S-3. Accordingly, based on the foregoing, we are currently eligible under General Instruction I.B.6 of Form S-3 to offer and sell shares of our common stock having an aggregate offering price of up to approximately \$4,344,201. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities in a public primary offering with a value exceeding one-third of our public float in any 12-month period so long as our public float remains below \$75.0 million.

Investing in our common stock involves a high degree of risk. See “[Risk Factors](#)” beginning on page S-7 of this prospectus supplement, page 4 of the accompanying prospectus and under similar headings in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus for a discussion of information that you should consider before investing in 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 truthful or complete. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co.

The date of this prospectus supplement is May 23, 2024.

TABLE OF CONTENTS

Prospectus Supplement

	Page
ABOUT THIS PROSPECTUS SUPPLEMENT	S-ii
CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS	S-iv
PROSPECTUS SUPPLEMENT SUMMARY	S-1
OFFERING SUMMARY	S-5
RISK FACTORS	S-7
USE OF PROCEEDS	S-11
DILUTION	S-12
PLAN OF DISTRIBUTION	S-14
LEGAL MATTERS	S-16
EXPERTS	S-16
WHERE YOU CAN FIND MORE INFORMATION	S-16
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	S-17

Prospectus

	Page
ABOUT THIS PROSPECTUS	1
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	2
PROSPECTUS SUMMARY	3
RISK FACTORS	4
USE OF PROCEEDS	4
DIVIDEND POLICY	4
PLAN OF DISTRIBUTION	4
DESCRIPTION OF SECURITIES WE MAY OFFER	7
LEGAL MATTERS	19
EXPERTS	20
WHERE YOU CAN FIND ADDITIONAL INFORMATION	20
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	20

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus form a part of a registration statement on Form S-3 (File No. 333-267971), which was declared effective on November 7, 2022, that we filed with the Securities Exchange Commission (“SEC”) utilizing a “shelf” registration process. Under the shelf registration process, we may offer and sell shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time, and, specifically, under this prospectus supplement we may offer and sell shares of our common stock having an aggregate offering price of up to \$4,344,000 from time to time at prices and on terms to be determined by market conditions at the time of offering.

This document is in two parts. The first part is the prospectus supplement, which describes the specific terms of this offering. The second part, the accompanying base prospectus, provides more general information about the securities we may offer from time to time, some of which may not apply to the securities offered by this prospectus supplement. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. Before you invest, you should carefully read this prospectus supplement, the accompanying base prospectus, all information incorporated by reference herein and therein, any free writing prospectus that we may authorize for use in connection with this offering, and the additional information described under “Where You Can Find More Information” in this prospectus supplement. These documents contain information you should consider when making your investment decision. This prospectus supplement may add, update or change information contained in the accompanying base prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying base prospectus or any documents incorporated by reference therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying base prospectus and such documents incorporated by reference therein. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference into this prospectus supplement — the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained or incorporated herein by reference in this prospectus supplement and in any free writing prospectus that we may authorize for use in connection with this offering and contained or incorporated therein by reference in the accompanying base prospectus. We have not, and Wainwright has not, authorized any other person to provide you with any information that is different. If anyone provides you with different, additional or inconsistent information, you should not rely on it. We are not, and Wainwright is not, making an offer to sell or soliciting an offer to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus supplement, the documents incorporated by reference into this prospectus supplement, and in any free writing prospectus that we may authorize for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

We are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying base prospectus and the offering of the securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus supplement outside the United States. This prospectus supplement and the accompanying base prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying base prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

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 the prospectus supplement and the accompanying base prospectus 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.

Unless the context otherwise requires, references in this prospectus supplement to the “Company,” “we,” “us” and “our” refer to Ascent Solar Technologies, Inc.

All trademarks, trade names and service marks appearing in this prospectus supplement, the accompanying base prospectus or the documents incorporated by reference herein or therein are the property of their respective owners. Use or display by us of other parties’ trademarks, trade dress or products is not intended to and does not imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owner. Solely for convenience, trademarks, tradenames and service marks referred to in this prospectus supplement, the accompanying base prospectus or the documents incorporated by reference herein or therein appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and trade names.

We have authorized only the information contained or incorporated by reference in this prospectus supplement, the accompanying base prospectus, and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not, and Wainwright has not, authorized anyone to provide you with information that is different. We and Wainwright take no responsibility for, and can provide no assurance as to the reliability of, any information that others may give you. We are offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The information contained in or incorporated by reference in this document is accurate only as of the date such information was issued, regardless of the time of delivery of this prospectus supplement or the date of any sale of our common stock.

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and the documents that we incorporate by reference, contain forward-looking statements as that term is defined in the federal securities laws. The events described in forward-looking statements contained in this prospectus supplement and the accompanying base prospectus, including the documents that we incorporate by reference, may not occur. Generally, these statements relate to our business plans or strategies, projected or anticipated benefits or other consequences of our plans or strategies, financing plans, projected or anticipated benefits from acquisitions that we may make, or projections involving anticipated revenues, earnings or other aspects of our operating results or financial position, and the outcome of any contingencies. Any such forward-looking statements are based on current expectations, estimates and projections of management. We intend for these forward-looking statements to be covered by the safe-harbor provisions for forward-looking statements. Words such as “may,” “expect,” “believe,” “anticipate,” “project,” “plan,” “intend,” “estimate,” and “continue,” and their opposites and similar expressions are intended to identify forward-looking statements. We caution you that these statements are not guarantees of future performance or events and are subject to a number of uncertainties, risks and other influences, many of which are beyond our control that may influence the accuracy of the statements and the projections upon which the statements are based. Factors that may affect our results include, but are not limited to, the risks and uncertainties discussed in the “[Risk Factors](#)” section on page S-7 of this prospectus supplement, in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 or in other reports we file with the SEC.

Any one or more of these uncertainties, risks and other influences could materially affect our results of operations and whether forward-looking statements made by us ultimately prove to be accurate. Our actual results, performance and achievements could differ materially from those expressed or implied in these forward-looking statements. We undertake no obligation to publicly update or revise any forward-looking statements, whether from new information, future events or otherwise.

You should rely only on the information in this prospectus supplement, the accompanying base prospectus and the documents that we incorporate by reference herein and therein. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement, the accompanying base prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus supplement and the accompanying base prospectus carefully, especially the risks of investing in our common stock discussed under “[Risk Factors](#)” beginning on page S-7 of this prospectus supplement and under similar sections of the accompanying base prospectus and other periodic reports incorporated herein and therein by reference, along with our consolidated financial statements and notes to those consolidated financial statements, before making an investment decision.

The Company

We were incorporated in 2005 from the separation by ITN Energy Systems, Inc. (“ITN”) of its Advanced Photovoltaic Division and all of that division’s key personnel, core technologies, and certain trade secrets and royalty free licenses to use in connection with the manufacturing, developing, marketing, and commercializing of Copper-Indium-Gallium-diSelenide (“CIGS”) photovoltaic (“PV”) products.

We are a solar technology company that manufactures and sells PV solar modules that are flexible, durable, and possess attractive power to weight and power to area performance. Our technology provides renewable power solutions to high-value production and specialty solar markets where traditional rigid solar panels are not suitable, including aerospace, agrivoltaics, and niche manufacturing/construction sectors. We operate in these target markets because they have highly specialized needs for power generation and offer attractive pricing due to the significant technological requirements.

We believe the value proposition of Ascent’s proprietary solar technology not only aligns with the needs of customers in our target markets, but also overcomes many of the obstacles other solar technologies face in space, aerospace and other markets. Ascent designs and develops finished products for end users in these areas and collaborates with strategic partners to design and develop integrated solutions for products like satellites, spacecraft, airships and fixed-wing unmanned aerial vehicles. Ascent sees significant overlap in the needs of end users across some of these markets and believes it can achieve economies of scale in sourcing, development, and production in commercializing products for these customers.

The integration of Ascent’s solar modules into space, near space, and aeronautic vehicles with ultra-lightweight and flexible solar modules is an important market opportunity for the Company. Customers in this market have historically required a high level of durability, high voltage and conversion efficiency from solar module suppliers, and we believe our products are well suited to compete in this premium market and will fill a void in the satellite market with a lower cost, lighter module and a product that, if struck by an object in space, will create limited space debris.

Recent Developments

Federal Funding Opportunities

In December 2023, the Company announced that the Company is pursuing several opportunities for federal funding through the Department of Energy (“DOE”) and the Small Business Administration, with determination and allocation scheduled for 2024, and as encouraged by the DOE, submitted applications and concept papers in Q4 2023. The Company was notified on May 22, 2024 that it was not selected for the Silicon Solar Manufacturing and Dual-Use Photovoltaics Incubator program funding for the development of its innovative agrivoltaic technology that would bring solar power to more remote areas around the world and optimize dual land use. The Company and its partner continue to wait for notification on the Solar Energy Technologies Office Funding Notice: Advancing U.S. Thin-Film Solar Photovoltaics, for advanced PV research and development that would enable future commercialization.

Ascent is prepared to lead groundbreaking research in the development and manufacturing of advanced solar cells should the proposals be selected for funding. The Company plans to do this both individually as well as in partnership with like-minded industry players whose technologies and manufacturing processes complement Ascent’s own unique capabilities.

Improvements to CIGS-Based Solar Cells

The Company continues to make improvements to its CIGS-based solar cells with improvements to our CIGS deposition layers in conjunction with developing and introducing our proprietary Zinc Oxysulfide process to our thin film material. This proprietary process helps increase our blue light absorption and in turn increase our efficiencies and our output power.

Perovskite Manufacturing Facility

In addition to the improvements in our CIGS-based solar cells, the Company continues to pursue Perovskite manufacturing development with partners by developing a hybrid CIGS/Perovskite PV module. Perovskites are a novel class of materials that have been recognized for their potential to increase PV power conversion efficiencies. As both films absorb and convert sunlight in their respective parts of the spectrum, the resulting single hybrid module could be tailored by using a similar approach as tandem devices but with higher efficiency and simpler construction and manufacturing process. While notable efficiency breakthroughs have been recorded in laboratories, the solar industry has been challenged to transform them into stable, high-efficiency products at industrial scale.

H.C. Wainwright Lawsuit

On August 15, 2023, Wainwright filed an action against the Company in the New York State Supreme Court in New York County. The complaint alleged a breach by the Company of an investment banking engagement letter entered into in October 2021. The Wainwright engagement letter expired in April 2022 without any financing transaction having been completed. The complaint claimed that Wainwright was entitled, under a “tail provision”, to an 8% cash fee and 7% warrant coverage on the Company’s \$15 million secured convertible note financing. The complaint sought damages of \$1.2 million, 2,169.5 common stock warrants with a per share exercise price of \$605, and attorney’s fees.

Subsequently, on May 15, 2024, the Company entered into a settlement and release agreement with Wainwright. The settlement and release agreement does not materially impact the Company’s financial statements.

Warrant Repurchase Agreements

On December 19, 2022, we entered into a Securities Purchase Contract (the “Purchase Contract”) with two institutional investors (the “Investors”). Pursuant to the Purchase Contract, the Company issued to the Investors certain common stock warrants.

These warrants have certain “full ratchet” anti-dilution adjustments that are triggered when the Company issues securities with a purchase or conversion, exercise or exchange price that is less than the exercise price of the warrants then in effect at any time. Under the full ratchet anti-dilution adjustments, if the Company issues new securities at a price lower than the then applicable exercise price, (i) the exercise price is reduced to the lower new issue price and (ii) the number of warrant shares is proportionately increased. The warrants have been previously adjusted following past issuances of Company securities. As of March 1, 2024, there were 5,596,232 warrants exercisable at an exercise price of \$1.76.

On March 6, 2024 and March 7, 2024, the Company entered into Warrant Repurchase Agreements (the “Repurchase Agreements”), with each of the Investors. Pursuant to the Repurchase Agreements, if the Company closes a new capital raising transaction with gross proceeds in excess of \$5 million (“Qualified Financing”), the Company will repurchase the warrants from the Investors for an aggregate purchase price of \$3.6 million by April 12, 2024. Following the delivery of the purchase price to the Investors, the Investors will relinquish all rights, title and interest in the warrants and assign the same to the Company, and the warrants will be cancelled.

On April 11, 2024, the Company and the Investors amended the Repurchase Agreements to provide for a \$1.8 million initial repurchase of the warrants. The amended agreements provide that the repurchase of the remaining warrants for \$1.8 million will occur not later than April 18, 2024. To extend the repurchase deadline, the Company agreed to issue the Investors approximately 7.1 million new warrants at an exercise price of \$0.14 per warrant. These new warrants will be exercisable at any time, and from time to time, in whole or in part, commencing six months from the issue date and expiring five and a half (5.5) years from the issue date and will be exercisable for cash only unless an effective registration statement is not available at the time of exercise, in which case the warrants could be exercised on a cashless basis. These new warrants provide for customary anti-dilution provisions.

The Company completed the Qualified Financing on April 18, 2024 in the form of a public offering of common stock (or pre-funded warrants in lieu thereof) at a per share offering price of \$0.14. The Company used the net proceeds from such offering (in addition to other available cash resources) to repurchase and cancel all 5,596,232 warrants issued in connection with the Purchase Contract and outstanding prior to the Qualified Financing. The Company's repurchase of these warrants eliminated a substantial potential future issuance of common stock at a substantially reduced price. If these warrants had not been repurchased, the number of warrant shares would have been adjusted in accordance with their terms from 5,596,232 to 70,554,495 warrant shares, and the exercise price would have been adjusted from \$1.76 to \$0.14.

Nasdaq Listing Status

Nasdaq Bid Price Notice

On December 11, 2023, the Company received a written notice (the "Notice") from the Listing Qualifications Department of The Nasdaq Stock Market ("Nasdaq") indicating that the Company is not in compliance with the \$1.00 Minimum Bid Price requirement set forth in Nasdaq Listing Rule 5550(a)(2) for continued listing on The Nasdaq Capital Market (the "Bid Price Requirement").

The Notice does not result in the immediate delisting of the Company's common stock from The Nasdaq Capital Market.

The Nasdaq Listing Rules require listed securities to maintain a minimum bid price of \$1.00 per share and, based upon the closing bid price of the Company's common stock for the 30 consecutive business days for the period October 27 through December 8, 2023, the Company no longer meets this requirement.

The Notice indicated that the Company will be provided 180 calendar days (or June 10, 2024) in which to regain compliance. If at any time during this 180 calendar day period the bid price of the Company's common stock closes at or above \$1.00 per share for a minimum of ten consecutive business days, the Nasdaq staff (the "Staff") will provide the Company with a written confirmation of compliance and the matter will be closed.

Alternatively, if the Company fails to regain compliance with Rule 5550(a)(2) prior to the expiration of the initial 180 calendar day period, the Company may be eligible for an additional 180 calendar day compliance period, provided (i) it meets the continued listing requirement for market value of publicly held shares and all other applicable requirements for initial listing on The Nasdaq Capital Market (except for the Bid Price Requirement) and (ii) it provides written notice to Nasdaq of its intention to cure this deficiency during the second compliance period by effecting a reverse stock split, if necessary. In the event the Company does not regain compliance with Rule 5550(a)(2) prior to the expiration of the initial 180 calendar day period, and if it appears to the Staff that the Company will not be able to cure the deficiency, or if the Company is not otherwise eligible, the Staff will provide the Company with written notification that its securities are subject to delisting from The Nasdaq Capital Market. At that time, the Company may appeal the delisting determination to a Hearings Panel.

The Company intends to monitor the closing bid price of its common stock and is considering its options to regain compliance with the Bid Price Requirement. The Company's receipt of the Notice does not affect the Company's reporting requirements with the Securities and Exchange Commission.

Nasdaq Stockholder Equity Requirement

Nasdaq Listing Rule 5550(b)(1) requires companies listed on Nasdaq to maintain a minimum of \$2,500,000 in stockholders' equity for continued listing (the "Equity Rule"). On March 5, 2024, the Company received notice from the Staff stating that the Company is not in compliance with the Equity Rule, as, the Company reported stockholders' equity of \$(1,526,611) in its Form 10-K for the year ended December 31, 2023.

As a result, the Staff determined to delist the Company's Common Stock from Nasdaq, unless the Company timely requested an appeal of the Staff's determination to a Hearings Panel (the "Panel"), pursuant to the procedures set forth in the Nasdaq Listing Rule 5800 Series.

In our quarterly report on Form 10-Q for the period ended March 31, 2024, the Company reported stockholders' equity of \$(2,550,139).

The Company had a hearing on May 9, 2024 before the Panel to appeal the delisting notice and to address compliance with the Equity Rule. The Company expects to receive a decision from the Panel within 30 days.

While the appeal process is pending, the suspension of trading of the Company's common stock will be stayed and the common stock will continue to trade on Nasdaq through the hearing and the expiration of any additional extension period granted by the Panel following the hearing.

There are no assurances that a favorable decision will be obtained from the Panel.

Going Concern Opinion

Our working capital deficiency, stockholders' deficit, and recurring losses from operations raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements for the year ended December 31, 2023, with respect to this uncertainty. Our ability to continue as a going concern will require us to obtain additional funding.

Smaller Reporting Company Status

We are a "smaller reporting company" meaning that the market value of our stock held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million. As a smaller reporting company, we may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and smaller reporting companies have reduced disclosure obligations regarding executive compensation.

We have taken advantage of these reduced reporting requirements in this prospectus supplement and in the documents incorporated by reference into this prospectus supplement. Accordingly, the information contained herein may be different from the information you receive from other public companies that are not smaller reporting companies.

Our corporate information

We were incorporated under the laws of Delaware in October 2005. Our principal business office is located at 12300 Grant Street, Thornton, Colorado 80241, and our telephone number is (720) 872-5000. Our website address is www.AscentSolar.com. Information contained on our website or any other website does not constitute, and should not be considered, part of this prospectus supplement.

OFFERING SUMMARY

Common Stock to be offered by us pursuant to this prospectus supplement

Shares of our common stock having an aggregate offering price of up to \$4,344,000.

Common Stock outstanding after this offering (1)

Up to 98,453,486 shares of common stock, assuming sales of up to 33,059,360 shares of common stock at a price of \$0.1314 per share, which was the closing price of our common stock on Nasdaq on May 22, 2024. The actual number of shares of our common stock issued will vary depending on the sales price at which shares may be sold from time to time during this offering.

Market for Common Stock

Our common stock is listed on Nasdaq under the symbol “ASTI.”

Manner of offering

Sales of our common stock, if any, under this prospectus supplement and accompanying base prospectus may be made by any method permitted by law deemed to be “at the market” offerings as defined in Rule 415 promulgated under the Securities Act, including, without limitation, sales made directly on or through Nasdaq, or any other existing trading market in the United States for our common stock. Wainwright is not required to sell any specific number or dollar amount of shares, but will act as a sales agent and use commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between Wainwright and us. See “[Plan of Distribution](#)” on page S-14 of this prospectus supplement.

Use of Proceeds

We currently intend to use the net proceeds from this offering, if any, for general and administrative expenses and other general corporate purposes. See “[Use of Proceeds](#)” on page S-11 of this prospectus supplement.

Risk factors

Your investment in our securities involves substantial risks. See “[Risk Factors](#)” beginning on page S-7 of this prospectus supplement, as well as the other information included in or incorporated by reference in this prospectus supplement and the accompanying base prospectus, for a discussion of risks you should carefully consider before investing in our securities.

(1) The number of shares of common stock to be outstanding immediately after this offering is based on 65,394,126 shares of our common stock outstanding as of May 23, 2024, and excludes as of such date:

- 9,784 shares of our common stock reserved for issuance under outstanding restricted stock units (“RSUs”) granted as employment inducement award to our CEO,
- 2,071,000 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.0001 per share,
- 7,100,000 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.14 per share,
- 1,090,252 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.175 per share,
- 3,572,635 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$2.88 per share,
- 107,179 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$3.60 per share,
- 7,076 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$1,060 per share,
- 10,769 shares of common stock reserved for issuance upon the conversion of our outstanding senior secured convertible notes, and
- 445,049 shares of common stock reserved for issuance under our new 2023 Equity Incentive Plan (the “2023 Plan”).

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise or conversion of the outstanding warrants and senior secured convertible notes described above.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before you make a decision to invest in our securities, you should consider carefully the risks described below, together with other information in this prospectus supplement, the accompanying base prospectus and the information incorporated by reference herein and therein, including any risk factors contained in our annual and other reports filed with the SEC. If any of the following events actually occur, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose all or part of your investment. The risks described below are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also significantly impair our business operations and could result in a complete loss of your investment.

Risks Related to this Offering

The actual number of shares we will issue under the Offering Agreement, at any one time or in total, is uncertain.

Subject to certain limitations in the Offering Agreement and compliance with applicable law, we have the discretion to deliver instruction to the Sales Agent to sell shares of our common stock at any time throughout the term of the Offering Agreement. The number of shares that are sold through the Sales Agent after our instruction will fluctuate based on a number of factors, including the market price of our common stock during the sales period, the limits we set with the Sales Agent in any instruction to sell shares, and the demand for our common stock during the sales period. Because the price per share of each share sold will fluctuate during this offering, it is not currently possible to predict the number of shares that will be sold or the gross proceeds to be raised in connection with those sales.

The common stock offered hereby will be sold in “at the market offerings,” and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and so may experience different levels of dilution, and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold in this offering, and there is no minimum or maximum sales price. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be invested successfully.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors in this offering will not have the opportunity as part of their investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these funds effectively could harm our business. See “[Use of Proceeds](#)” on page S-11 of this prospectus supplement for a description of our proposed use of proceeds from this offering.

If you purchase shares of our common stock sold in this offering, you will experience immediate and substantial dilution in the pro forma net tangible book value per share of your shares. In addition, we may issue additional equity or convertible debt securities in the future, which may result in additional dilution to investors.

The price per common share in this offering is substantially higher than the net tangible book value of each outstanding share of our common stock, and accordingly investors in this offering will experience immediate and substantial dilution. Assuming that an aggregate of 33,059,360 shares of our common stock are sold during the term of the Offering Agreement with Wainwright at a price of \$0.1314 per share, the last reported sale price of our common stock on Nasdaq on May 22, 2024, for aggregate gross proceeds of \$4,344,000, and after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of approximately \$0.06 per share, representing the difference between the assumed offering price and our as adjusted pro forma net tangible book value per share as of March 31, 2024 after giving effect to this offering at the assumed offering price. See “[Dilution](#)” on page S-12 of this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase shares in this offering. To the extent outstanding warrants are exercised or outstanding notes are converted or if we issue equity-based awards under the 2023 Plan, there could be further dilution to new investors. In addition, to the extent we need to raise additional capital in the future and we issue additional equity or convertible debt securities, our then existing stockholders may experience dilution and the new securities may have rights senior to those of our common stock offered in this offering.

Our common stock price may be volatile and could decline substantially.

The trading price of our common stock may experience wide fluctuations. The price of the common stock that will prevail in the market may be higher or lower than that of this offering depending on numerous factors, some of which are beyond our control and may not be directly related to our operating performance. These factors include, but are not limited to, the following:

- actual or anticipated fluctuations in our operating results;
- the absence of securities analysts covering us and distributing research and recommendations about us;
- we may have a low trading volume for a number of reasons;
- overall stock market fluctuations;
- announcements concerning our business or those of our competitors;
- actual or perceived limitations on our ability to raise capital when we require it, and to raise such capital on favorable terms;
- conditions or trends in the industry;
- adverse developments in our efforts to maintain the Nasdaq listing of our common stock;
- litigation;
- changes in market valuations of other similar companies;
- future sales of common stock;
- departure of key personnel or failure to hire key personnel;
- general market conditions; and
- other risk factors described elsewhere in our public filings.

Any of these factors could have a significant and adverse impact on the market price of our common stock. In addition, the stock market in general has at times experienced extreme volatility and rapid decline that has often been unrelated or disproportionate to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock, regardless of our actual operating performance.

We cannot assure you that the market price of our common stock will not decline. Accordingly, we cannot assure you that you will be able to sell your common stock at a price equal to or greater than the purchase price.

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

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

We need to raise capital in this offering and subsequent to this offering to support our operations, and there is substantial doubt about our ability to continue as a going concern. If we are unable to raise capital when needed, we could be forced to complete a wind down of our operations and/or seek bankruptcy protection.

We have determined that the Company's available cash at March 31, 2024, together with proceeds raised in this offering, assuming we sell the entire amount offered pursuant to this prospectus supplement and the accompanying base prospectus, will not be sufficient to fund current liabilities and capital expenditure requirements for the year 2024. As a result, we will need to continue to raise additional funding after the completion of this offering in order to permit us to continue our operations. The Company's ability to continue as a going concern is dependent upon obtaining funding through one or more sources described below to meet its planned obligations and pay its liabilities. Adequate additional financing may not be available to us on acceptable terms, or at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders. In addition, the issuance of additional securities, by us, or the possibility of such issuance, may cause the market price of our shares to decline. Such additional financing could involve the issuance and sale of redeemable or convertible preferred stock which terms may include liquidation preferences, price resets or other anti-dilution protections, or other equity or debt securities senior to our common stock, that would provide their holders with significant preferences and other rights over our common stock and which could reduce or eliminate some or all of the value of our common stock and any other securities exercisable for or convertible into our common stock. In addition, the additional financing may result in certain governance and other board rights being provided to investors in that financing and also may require that we delist from Nasdaq and seek to suspend our reporting requirements under the Exchange Act.

The sale of additional equity or convertible securities will also substantially dilute all of our stockholders. We could also be required to seek funds through arrangements with potential collaboration partners, including at an earlier stage than otherwise would be desirable, and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects. In addition, our board of directors will need to consider the interests of all our constituents and take appropriate action, including to restructure or wind down the business, if it appears that we are insolvent. If we are unable to obtain additional funding on a timely basis, we may resume pursuit of a wind down of our operations and/or seek bankruptcy or similar protection. As a result, our business, financial condition and results of operations would be materially affected and our stockholders would lose all of their investment.

We may fail to continue to meet the listing standards of Nasdaq. Failure to maintain the listing of our common stock with a U.S. national securities exchange could adversely affect the liquidity of our common stock.

Our common stock is currently listed on Nasdaq. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards.

Nasdaq \$1.00 Bid Price Requirement

On December 11, 2023, the Company received a written notice (the "Notice") from the Listing Qualifications Department of Nasdaq indicating that the Company is not in compliance with the \$1.00 Minimum Bid Price requirement set forth in Nasdaq Listing Rule 5550(a)(2) for continued listing on Nasdaq (the "Bid Price Requirement").

The Notice does not result in the immediate delisting of the Company's common stock from Nasdaq.

The Nasdaq Listing Rules require listed securities to maintain a minimum bid price of \$1.00 per share and, based upon the closing bid price of the Company's common stock for the 30 consecutive business days for the period October 27 through December 8, 2023, the Company no longer meets this requirement.

The Notice indicated that the Company will be provided 180 calendar days (or June 10, 2024) in which to regain compliance. If at any time during this 180 calendar day period the bid price of the Company's common stock closes at or above \$1.00 per share for a minimum of ten consecutive business days, the Nasdaq staff (the "Staff") will provide the Company with a written confirmation of compliance and the matter will be closed.

Alternatively, if the Company fails to regain compliance with Rule 5550(a)(2) prior to the expiration of the initial 180 calendar day period, the Company may be eligible for an additional 180 calendar day compliance period, provided (i) it meets the continued listing requirement for market value of publicly held shares and all other applicable requirements for initial listing on Nasdaq (except for the Bid Price Requirement) and (ii) it provides written notice to Nasdaq of its intention to cure this deficiency during the second compliance period by effecting a reverse stock split, if necessary. In the event the Company does not regain compliance with Rule 5550(a)(2) prior to the expiration of the initial 180 calendar day period, and if it appears to the Staff that the Company will not be able to cure the deficiency, or if the Company is not otherwise eligible, the Staff will provide the Company with written notification that its securities are subject to delisting from Nasdaq. At that time, the Company may appeal the delisting determination to a Hearings Panel.

The Company intends to monitor the closing bid price of its common stock and is considering its options to regain compliance with the Bid Price Requirement. The Company's receipt of the Notice does not affect the Company's reporting requirements with the Securities and Exchange Commission.

Nasdaq Stockholder Equity Requirement

Nasdaq Listing Rule 5550(b)(1) requires companies listed on Nasdaq to maintain a minimum of \$2,500,000 in stockholders' equity for continued listing (the "Equity Rule"). On March 5, 2024, the Company received notice from the Staff stating that the Company is not in compliance with the Equity Rule, as the Company reported stockholders' equity of \$(1,526,611) in its Form 10-K for the year ended December 31, 2023.

As a result, the Staff determined to delist the Company's common stock from Nasdaq, unless the Company timely requested an appeal of the Staff's determination to a Hearings Panel (the "Panel"), pursuant to the procedures set forth in the Nasdaq Listing Rule 5800 Series.

In our quarterly report on Form 10-Q for the period ended March 31, 2024, the Company reported stockholders' equity of \$(2,550,139).

The Company had a hearing on May 9, 2024 before the Panel to appeal the delisting notice and to address compliance with the Equity Rule. The Company expects to receive a decision from the Panel within 30 days.

While the appeal process is pending, the suspension of trading of the Company's common stock will be stayed and the common stock will continue to trade on Nasdaq through the hearing and the expiration of any additional extension period granted by the Panel following the hearing.

There are no assurances that a favorable decision will be obtained from the Panel.

If we fail to satisfy the continued listing requirements of Nasdaq, Nasdaq may take steps to delist our securities. Such a delisting would likely have a negative effect on the price and liquidity of our common stock and would impair your ability to sell our common stock purchased in this offering when you wish to do so. In the event of a delisting, we would take actions to restore our compliance with Nasdaq's listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock to become listed again, stabilize the market price or improve the liquidity of our securities, prevent our common stock from dropping below the Nasdaq minimum share price requirement or prevent future non-compliance with Nasdaq's listing requirements.

If our common stock were to be delisted from Nasdaq, our common stock could begin to trade on one of the markets operated by OTC Markets Group, including OTCQX, OTCQB or OTC Pink (formerly known as the "pink sheets"), as the case may be. In such event, our common stock could be subject to the "penny stock" rules which, among other things, require brokers or dealers to approve investors' accounts, receive written agreements and determine investor suitability for transactions and disclose risks relating to investing in the penny stock market. Any such delisting of our common stock could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock, not only in terms of the number of shares that can be bought and sold at a given price, but also through delays in the timing of transactions and less coverage of us by securities analysts, if any. Also, if in the future we were to determine that we need to seek additional equity capital, it could have an adverse effect on our ability to raise capital in the public or private equity markets. In addition, there can be no assurance that our common stock would be eligible for trading on any such alternative exchange or markets.

Delisting from Nasdaq could adversely affect our ability to raise additional financing through public or private sales of equity securities, would significantly affect the ability of investors to trade our securities and would negatively affect the value and liquidity of our common stock. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest and fewer business development opportunities.

USE OF PROCEEDS

We may offer and sell shares of our common stock having aggregate sales proceeds of up to \$4,344,000 from time to time under this prospectus supplement and accompanying base prospectus. The amount of proceeds we receive, if any, will depend on the actual number of shares of our common stock sold and the market price at which such shares are sold. There can be no assurance that we will be able to sell any shares or fully utilize the Offering Agreement with Wainwright as a source of financing. Because there is no minimum offering amount required as a condition of this offering, the net proceeds to us, if any, are not determinable at this time.

We currently intend to use the net proceeds from this offering, if any, for general and administrative expenses and other general corporate purposes.

We have broad discretion in determining how the proceeds of this offering will be used, and our discretion is not limited by the aforementioned possible uses. Our board of directors believes the flexibility in application of the net proceeds is prudent. See the section entitled *“Risk Factors-Risks Relating to this Offering-Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds, and the proceeds may not be invested successfully.”*

DILUTION

If you invest in this offering, you will experience immediate and substantial dilution to the extent of the difference between the offering price per share in this offering and the as adjusted net tangible book value per share of our common stock after giving effect to this offering.

We calculate net tangible book value per share by dividing the net tangible book value, which is the total tangible assets less total liabilities adjusted for lease liabilities, by the number of outstanding shares of our common stock. Dilution represents the difference between the amount per share paid by purchasers of shares in this offering and the as-adjusted net tangible book value per share of our common stock immediately after giving effect to this offering. Our net tangible book value as of March 31, 2024, was approximately \$(2.43) million, or \$(0.36) per share of common stock.

Our pro forma net tangible book value as of March 31, 2024, was approximately \$2.4 million, or \$0.04 per share of common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities adjusted for lease liabilities, after giving effect to the issuance of (i) an aggregate of 24,332,693 shares of Common Stock sold pursuant to the Sales Agreement after March 31, 2024 for aggregate gross proceeds of approximately \$4,216,209, (ii) an aggregate of 12,629,460 shares of common stock through Dawson James Securities Inc. (“Dawson James”) in April 2024 pursuant to the terms of the Placement Agency Agreement, for which the Company received aggregate net proceeds of approximately \$800,000 after repurchasing 5,596,232 fully ratcheting warrants exercisable at \$1.76 per share and settling a \$200,000 payable related to our December 2022 financing agreement; (iii) an aggregate of 19,091,277 prefunded warrants converted into shares of common stock issued with our April 2024 offering; and (iv) an aggregate of 79,951 shares of common stock issued to employees under our 2023 Plan.

After giving effect to the sale of 33,059,360 shares of our common stock pursuant to this prospectus supplement and the accompanying base prospectus for an aggregate amount of approximately \$4,344,000 at an assumed offering price of \$0.1314 per share, the last reported sale price of our common stock on Nasdaq on May 22, 2024, and after deducting commissions and estimated aggregate offering expenses payable by us, our as adjusted pro forma net tangible book value as of March 31, 2024 would have been approximately \$6.4 million, or \$0.07 per share of common stock. This represents an immediate increase in net tangible book value of \$0.03 per share to our existing stockholders and an immediate dilution in net tangible book value of \$0.06 per share to new investors.

The following table illustrates this dilution on a per share basis:

Assumed public offering price per share		\$ 0.1314
Historical net tangible book value per common share as of March 31, 2024	\$ (0.36)	
Increase in net tangible book value per common share after giving effect to the issuance of an aggregate of (i) 24,332,693 shares of common stock pursuant to the Sales Agreement; (ii) 12,629,460 shares of common stock through Dawson James pursuant to the terms of the Placement Agency Agreement; (iii) 19,091,277 prefunded warrants converted into shares of common stock; and (iv) of 79,951 shares of common stock issued to employees	\$ 0.40	
Pro forma net tangible book value per share as of March 31, 2024	\$ 0.04	
Increase in as adjusted pro forma net tangible book value per share attributable to new investors purchasing our common stock in this offering	\$ 0.03	
As adjusted pro forma net tangible book value per share as of March 31, 2024		\$ 0.07
Dilution in net tangible book value per share to new investors purchasing our common stock in this offering		\$ 0.06

The table above assumes for illustrative purposes that an aggregate of 33,059,360 shares of our common stock are sold pursuant to this prospectus supplement and the accompanying base prospectus at a price of \$0.1314 per share, the last reported sale price of our common stock on Nasdaq on May 22, 2024, for aggregate gross proceeds of approximately \$4,344,000 in this offering. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of \$0.05 per share in the price at which the shares are sold from the assumed offering price of \$0.1314 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$0.1814 per share is sold at that price, would result in an as adjusted pro forma net tangible book value per share after the offering of \$0.08 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$0.10 per share, after deducting commissions and estimated aggregate offering expenses payable by us. A decrease of \$0.05 per share in the price at which the shares are sold from the assumed offering price of \$0.1314 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$0.0814 per share is sold at that price, would result in an as adjusted pro forma net tangible book value per share after the offering of \$0.05 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$0.03 per share, after deducting commissions and estimated aggregate offering expenses payable by us.

The number of shares of common stock to be outstanding immediately after this offering is based on 65,394,126 shares of our common stock outstanding as of May 23, 2024, and the actual, pro forma and pro forma as adjusted information set forth in the table excludes as of such date:

- 9,784 shares of our common stock reserved for issuance under outstanding restricted stock units (“RSUs”) granted as employment inducement award to our CEO,
- 2,071,000 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.0001 per share,
- 7,100,000 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.14 per share,
- 1,090,252 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$0.175 per share,
- 3,572,635 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$2.88 per share,
- 107,179 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$3.60 per share,
- 7,076 shares of common stock reserved for issuance upon the exercise of outstanding common stock warrants, at an exercise price of \$1,060 per share,
- 10,769 shares of common stock reserved for issuance upon the conversion of our outstanding senior secured convertible notes, and
- 445,049 shares of common stock reserved for issuance under our 2023 Plan.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise or conversion of the warrants or the senior secured convertible notes described above.

To the extent that warrants are exercised, notes are converted or other derivative securities are exercised or converted into common stock, there may be further dilution to new investors.

PLAN OF DISTRIBUTION

We entered into the Offering Agreement with Wainwright, on May 16, 2024, under which and this prospectus supplement, we may issue and sell from time to time shares of our common stock having an aggregate offering price of not more than \$4,344,000 through Wainwright as our sales agent. Sales of the common stock, if any, will be made by any method permitted by law deemed to be an “at-the-market offering” as defined in Rule 415 promulgated under the Securities Act, including sales made directly on the Nasdaq Capital Market, the trading market for our common stock, or any other existing trading market in the United States for our common stock, or sales made to or through a market maker other than on an exchange. If we and Wainwright agree on any method of distribution other than sales of shares of our common stock on the Nasdaq Capital Market or another existing trading market in the United States at market prices, we will file a further prospectus supplement providing all information about such offering as required by Rule 424(b) under the Securities Act.

Wainwright will offer our common stock at prevailing market prices subject to the terms and conditions of the Offering Agreement as agreed upon by us and Wainwright. We will designate the number of shares which we desire to sell, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in one day and any minimum price below which sales may not be made. Subject to the terms and conditions of the Offering Agreement, Wainwright will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell on our behalf all of the shares of common stock requested to be sold by us. We or Wainwright may suspend the offering of the common stock being made through Wainwright under the Offering Agreement upon proper notice to the other party.

Settlement for sales of common stock will occur on the second trading day (and on and after May 28, 2024, on the first trading day, or any such shorter settlement cycle as may be in effect under the Exchange Act from time to time), following the date on which any sales are made, or on some other date that is agreed upon by us and Wainwright in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Wainwright may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Wainwright a cash commission equal to 3.0% of the gross sales price of the shares sold by Wainwright under the Offering Agreement. Because there is no minimum offering amount required as a condition to this offering, the actual total offering amount, sales commissions and proceeds to us, if any, are not determinable at this time. Pursuant to the terms of the Offering Agreement, we previously reimbursed Wainwright for the reasonable fees and expenses of its legal counsel incurred in connection with entering into the transactions contemplated by the Offering Agreement of \$100,000. Additionally, pursuant to the terms of the Offering Agreement, we agreed to reimburse Wainwright up to \$5,000 per due diligence update session conducted in connection with each such date we file our Annual Report on Form 10-K and \$2,500 per due diligence update session for the three, six and nine months ended on and as of the last day of the first, second and third fiscal quarters, respectively. We estimate that the total expenses of the offering payable by us, excluding commissions and other fees payable to Wainwright under the Offering Agreement, will be approximately \$331,000, assuming we sell the entire amount offered pursuant to this prospectus supplement and the accompanying base prospectus. We will disclose in our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q, as applicable, the number of shares of our common stock sold through Wainwright under the Offering Agreement, the net proceeds to us and the compensation paid by us with respect to sales under the Offering Agreement during the relevant quarter.

In connection with the sales of common stock on our behalf, Wainwright will be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation paid to Wainwright will be deemed to be underwriting commissions or discounts. We have agreed in the Offering Agreement to provide indemnification and contribution to Wainwright against certain liabilities, including liabilities under the Securities Act.

The offering of our shares of common stock pursuant to this prospectus supplement will terminate upon the earlier of the (i) sale of all of our shares of common stock provided for in this prospectus supplement or (ii) termination of the Offering Agreement as permitted therein.

To the extent required by Regulation M, Wainwright will not engage in any market making activities involving our shares of common stock while the offering is ongoing under this prospectus supplement.

From time to time, Wainwright and its affiliates have and may provide in the future various advisory, investment and commercial banking and other services to us and our affiliates in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. In addition, in the ordinary course of its various business activities, Wainwright and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. Wainwright or its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments. In addition, on August 15, 2023, Wainwright filed an action against us in the New York State Supreme Court in New York County. The complaint alleged a breach by us of an investment banking engagement letter entered into in October 2021. The Wainwright engagement letter expired in April 2022 without any financing transaction having been completed. The complaint claimed that Wainwright was entitled, under a “tail provision”, to an 8% cash fee and 7% warrant coverage on our \$15 million secured convertible note financing. The complaint sought damages of \$1.2 million, 2,169.5 common stock warrants with a per share exercise price of \$605, and attorney’s fees. Subsequently, on May 15, 2024, we entered into a settlement and release agreement with Wainwright. See the section entitled “Prospectus Supplement Summary – Recent Developments – *H.C. Wainwright Lawsuit*” for additional information.

This summary of the material provisions of the Offering Agreement does not purport to be a complete statement of its terms and conditions. A copy of the Offering Agreement was filed with the SEC on a Current Report on Form 8-K on May 16, 2024.

This prospectus supplement in electronic format may be made available on a website maintained by Wainwright and Wainwright may distribute this prospectus supplement electronically.

The transfer agent for our common stock to be issued in this offering is Computershare Investor Services, LLC.

LEGAL MATTERS

Carroll Legal LLC, Denver, Colorado, will pass upon the validity of the securities offered hereby for us. Haynes and Boone, LLP, New York, New York, is acting as counsel for the Sales Agent in connection with certain legal matters related to this offering.

EXPERTS

The audited financial statements incorporated by reference in this prospectus supplement and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of Haynie & Company, independent registered public accountants, as set forth in their report, thereon (which contains an explanatory paragraph relating to substantial doubt about the ability of Ascent Solar Technologies, Inc. to continue as a going concern as described in Note 4 to the financial statements as of December 31, 2023 and 2022), appearing elsewhere in this prospectus supplement, and are included in reliance on such report given on the authority of such firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission (the “SEC”) a registration statement on Form S-3 under the Securities Act, with respect to the securities covered by this prospectus supplement. This prospectus supplement, which is a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information with respect to us and the securities covered by this prospectus supplement, please see the registration statement and the exhibits filed with the registration statement. Statements contained in this prospectus supplement and the accompanying base prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. The SEC maintains an internet website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is <http://www.sec.gov>.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, we file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available for inspection and copying at the website of the SEC referred to above. We maintain a website at <http://www.ascentsolar.com>. You may access our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed pursuant to Sections 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus supplement or the accompanying base prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with them, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying base prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below:

- Our Annual Report on Form 10-K for the year ended [December 31, 2023](#), filed with the SEC on February 21, 2024;
- Our Quarterly Report on Form 10-Q for the quarter ended [March 31, 2024](#), filed with the SEC on May 9, 2024;
- Our Current Reports on Form 8-K filed with the SEC on [March 7, 2024](#), [March 11, 2024](#), [April 12, 2024](#), [April 18, 2024](#); and [May 16, 2024](#) (other than any portions thereof deemed furnished and not filed); and
- The description of our Common Stock contained in our Registration Statement on [Form 8-A](#) filed with the SEC on August 16, 2022, including any amendment or report filed for the purpose of updating such information.

In addition, all filed information contained in reports and documents filed with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of this prospectus supplement and before the termination or completion of this offering, shall be deemed to be incorporated by reference in this prospectus supplement. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated or deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

We will provide, without charge, to each person to whom a copy of this prospectus supplement is delivered, including any beneficial owner, upon the written or oral request of such person, a copy of any or all of the documents incorporated by reference herein, including exhibits. Requests should be directed to:

Ascent Solar Technologies, Inc.
12300 Grant Street
Thornton, CO 80231
Attention: CFO
Telephone number: (720) 872-5000

In addition, you may obtain a copy of these filings from the SEC as described in the section entitled “Where You Can Find More Information.”

PROSPECTUS

ASCENT SOLAR TECHNOLOGIES, INC.

\$100,000,000

**COMMON STOCK
PREFERRED STOCK
WARRANTS
SUBSCRIPTION RIGHTS
DEBT SECURITIES
PURCHASE CONTRACTS
UNITS**

We may offer and sell from time to time, in one or more series, any one of the following securities of our company, for total gross proceeds of up to \$100,000,000:

- common stock;
- preferred stock;
- warrants to purchase common stock, preferred stock, debt securities, other securities or any combination of those securities;
- subscription rights to purchase common stock, preferred stock, debt securities, other securities or any combination of those securities;
- secured or unsecured debt securities consisting of notes, debentures or other evidences of indebtedness which may be senior debt securities, senior subordinated debt securities or subordinated debt securities, each of which may be convertible into equity securities;
- purchase contracts, including contracts obligating holders to purchase from or sell to us, and obligating us to sell to or purchase from the holders, common stock, preferred stock, debt securities, other securities or any combination of those securities at a future date or dates; or
- units comprised of, or other combinations of, the foregoing securities.

The securities being registered hereunder also include such indeterminate amount of securities as may be issued upon exercise, settlement, exchange or conversion of the securities of each identified class above as may from time to time be offered or sold hereunder, or pursuant to the antidilution provisions of any such securities.

We may offer and sell these securities separately or together, in one or more series or classes and in amounts, at prices and on terms described in one or more offerings. We may offer securities through underwriting syndicates managed or co-managed by one or more underwriters or dealers, through agents or directly to purchasers. The prospectus supplement for each offering of securities will describe in detail the plan of distribution for that offering. For general information about the distribution of securities offered, please see “Plan of Distribution” in this prospectus.

Each time our securities are offered, we will provide a prospectus supplement containing more specific information about the particular offering and attach it to this prospectus. The prospectus supplements may also add, update or change information contained in this prospectus.

This prospectus may not be used to offer or sell securities without a prospectus supplement which includes a description of the method and terms of this offering.

Our common stock is quoted on the Nasdaq Capital Market under the symbol “ASTI.” The last reported sale price of our common stock on the Nasdaq Capital Market on November 7, 2022 was \$2.86 per share. The aggregate market value of our outstanding common stock held by non-affiliates is \$21,431,436 based on 33,930,812 shares of outstanding common stock, of which 7,493,509 shares are held by non-affiliates, and a per share price of \$2.86, which was the closing sale price of our common stock as quoted on the Nasdaq Capital Market on November 7, 2022.

We have not offered and sold any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date of this prospectus.

If we decide to seek a listing of any securities, other than shares of common stock, offered by this prospectus, the related prospectus supplement will disclose the exchange or market on which the securities will be listed, if any, or where we have made an application for listing, if any.

Investing in our securities is highly speculative and involves a significant degree of risk. See “[Risk Factors](#)” beginning on page 4 and the risk factors in our most recent Annual Report on Form 10-K, which is incorporated by reference herein, as well as in any other recently filed quarterly or current reports and, if any, in the relevant prospectus supplement. We urge you to carefully read this prospectus and the accompanying prospectus supplement, together with the documents we incorporate by reference, describing the terms of these securities before investing.

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

The date of this prospectus is November 7, 2022.

TABLE OF CONTENTS

	Page
<u>ABOUT THIS PROSPECTUS</u>	1
<u>CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS</u>	2
<u>PROSPECTUS SUMMARY</u>	3
<u>RISK FACTORS</u>	4
<u>USE OF PROCEEDS</u>	4
<u>DIVIDEND POLICY</u>	4
<u>PLAN OF DISTRIBUTION</u>	4
<u>DESCRIPTION OF SECURITIES WE MAY OFFER</u>	7
<u>LEGAL MATTERS</u>	19
<u>EXPERTS</u>	20
<u>WHERE YOU CAN FIND ADDITIONAL INFORMATION</u>	20
<u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u>	2018

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may offer and sell, either individually or in combination, in one or more offerings, any of the securities described in this prospectus, for total gross proceeds of up to \$100,000,000. We are also registering hereunder such indeterminate amount of the securities of each class of securities described in this prospectus as may from time to time be offered hereunder at indeterminate prices which shall have an aggregate initial offering price not to exceed \$100,000,000. The securities being registered hereunder also include such indeterminate amount of securities as may be issued upon exercise, settlement, exchange or conversion of the securities offered or sold hereunder, or pursuant to the antidilution provisions of any such securities. If any debt securities are issued at an original issue discount, then the principal amount of such debt securities shall be in such greater amount as shall result in an aggregate initial offering price not to exceed \$100,000,000, less the aggregate dollar amount of all securities previously issued hereunder.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this prospectus, we will provide a prospectus supplement to this prospectus that will contain more 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. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus.

We urge you to read carefully this prospectus, any applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described under the heading “Incorporation of Documents by Reference,” before investing in any of the securities being offered. You should rely only on the information contained in, or incorporated by reference into, this prospectus and any applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. 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.

The information appearing in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section entitled “Where You Can Find Additional Information.”

This prospectus contains, or incorporates by reference, trademarks, tradenames, service marks and service names of Ascent Solar Technologies, Inc.

CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus and any accompanying prospectus or prospectus supplement and the documents incorporated by reference herein and therein may contain forward looking statements that involve significant risks and uncertainties. All statements other than statements of historical fact contained in this prospectus and any accompanying prospectus supplement and the documents incorporated by reference herein, including statements regarding future events, our future financial performance, business strategy, and plans and objectives of management for future operations, are forward-looking statements. We have attempted to identify forward-looking statements by terminology including “anticipates,” “believes,” “can,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “should,” or “will” or the negative of these terms or other comparable terminology. Although we do not make forward looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Risk Factors” or elsewhere in this prospectus and the documents incorporated by reference herein, which may cause our or our industry’s actual results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Moreover, we operate in a highly regulated, very competitive, and rapidly changing environment. New risks emerge from time to time and it is not possible for us to predict all risk factors, nor can we address the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause our actual results to differ materially from those contained in any forward-looking statements.

We have based these forward-looking statements largely on our current expectations and assumptions about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short term and long term business operations, and financial needs. These forward-looking statements are subject to certain risks and uncertainties that could cause our actual results to differ materially from those reflected in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in this prospectus, and in particular, the risks discussed below and under the heading “Risk Factors” and those discussed in other documents we file with the SEC which are incorporated by reference herein. This prospectus, and any accompanying prospectus or prospectus supplement, should be read in conjunction with the consolidated financial statements for the fiscal years ended December 31, 2021 and 2020 and related notes, which are incorporated by reference herein, as may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future that are incorporated by reference herein.

We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. In light of the significant risks, uncertainties and assumptions that accompany forward-looking statements, the forward-looking events and circumstances discussed in this prospectus and any accompanying prospectus or prospectus supplement may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statement.

You should not place undue reliance on any forward-looking statement, each of which applies only as of the date of this prospectus, or any accompanying prospectus or any prospectus supplement. Except as required by law, we undertake no obligation to update or revise publicly any of the forward-looking statements after the date of this prospectus to conform our statements to actual results or changed expectations.

Any forward-looking statement you read in this prospectus, any accompanying prospectus, or any prospectus supplement or any document incorporated by reference reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, operating results, growth strategy and liquidity. You should not place undue reliance on these forward-looking statements because such statements speak only as to the date when made. We assume no obligation to publicly update or revise these forward-looking statements for any reason, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future, except as otherwise required by applicable law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K filed with the SEC that are incorporated by reference herein. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing in our Company. You should carefully read the entire prospectus, including all documents incorporated by reference herein. In particular, attention should be directed to our “Risk Factors,” “Information With Respect to the Company,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and related notes thereto contained herein or otherwise incorporated by reference hereto, before making an investment decision.

As used herein, and any amendment or supplement hereto, unless otherwise indicated, “we,” “us,” “our,” the “Company,” “Ascent,” or “Ascent Solar” means Ascent Solar Technologies, Inc.

Overview

Ascent Solar was formed in October 2005 as a spinoff from technology incubator, ITN Energy Systems, Inc. (“ITN”), of its Advanced Photovoltaic Division and all of that division’s key personnel and core technologies, to commercialize flexible photovoltaic (“PV”) modules using our proprietary, monolithic integration thin-film technology. The technology was initially developed at ITN beginning in 1994 and subsequently assigned and licensed to us at formation in 2005. Our proprietary manufacturing process deposits multiple layers of materials, including a thin film of highly efficient copper-indium-gallium-diselenide (“CIGS”) semiconductor material, on a flexible, lightweight, high tech plastic substrate, using a roll-to-roll manufacturing process followed by laser patterning the layers to create interconnected PV cells, or PV modules, in a process known as monolithic integration. We believe that our unique technology and manufacturing process, which results in a much lighter, flexible yet durable module package, provides us with unique market opportunities relative to both the crystalline silicon (“c-Si”) based PV manufacturers that currently lead the PV market, as well as other thin film PV manufacturers that use substrate materials such as glass, stainless steel or other metals that can be heavier and more rigid than plastics.

We believe that the use of CIGS on a flexible, durable, lightweight, high-tech plastic substrate will allow for unique and seamless integration of our PV modules into a variety of applications such as aerospace, defense, transportation, electronic products, off-grid structures and building integrated, as well as other products and applications that may emerge. For markets that place a high premium on weight, such as defense, space, near space, and aeronautic markets, we believe our materials provide attractive increases in power-to-weight ratio (specific power), and that our materials have superior specific power and voltage-to-area ratios than competing flexible PV thin-film technologies. These metrics will be critical as we position ourselves to compete in challenging high value markets, such as aerospace, where Ascent Solar products can be integrated into satellites, near earth orbiting vehicles, airships and fixed wing unmanned aerial vehicles (“UAV”).

Smaller Reporting Company Status

We are a “smaller reporting company” meaning that the market value of our stock held by non-affiliates is less than \$700 million and our annual revenue was less than \$100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million.

As a smaller reporting company, we may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Corporate Information

We were incorporated under the laws of Delaware in October 2005. Our principal business office is located at 12300 Grant Street, Thornton, Colorado 80241, and our telephone number is (720) 872-5000. Our website address is www.ascentsolar.com. Information contained on our website or any other website is not a part of, or incorporated in, this prospectus.

RISK FACTORS

Investing in our securities is highly speculative and involves a high degree of risk. Before deciding whether to invest in our securities, you should carefully consider the risk factors we describe in any accompanying prospectus or any future prospectus supplement, as well as in any related free writing prospectus for a specific offering of securities, and the risk factors incorporated by reference into this prospectus, any accompanying prospectus or such prospectus supplement. You should also carefully consider other information contained and incorporated by reference in this prospectus and any applicable prospectus supplement, including our financial statements and the related notes thereto incorporated by reference in this prospectus. The risks and uncertainties described in the applicable prospectus supplement and our other filings with the SEC incorporated by reference herein are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial may also adversely affect us. If any of the described risks occur, our business, financial condition or results of operations could be materially harmed. In such case, the value of our securities could decline and you may lose all or part of your investment.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from these sales for general corporate purposes, which includes, without limitation, continuing to build out our PV technology, expanding our sales and marketing efforts, research and development expenses, sales and support staff, and manufacturing development. The amounts and timing of these expenditures will depend on numerous factors, including the development of our current business initiatives.

DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain all available funds and any future earnings to fund the development and expansion of our business. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. Our future ability to pay cash dividends on our stock may also be limited by the terms of any future debt or preferred securities or future credit facility.

PLAN OF DISTRIBUTION

We may sell the securities from time to time to or through underwriters or dealers, through agents, or directly to one or more purchasers. A distribution of the securities offered by this prospectus may also be effected through the issuance of derivative securities, including without limitation, warrants, rights to purchase and subscriptions. In addition, the manner in which we may sell some or all of the securities covered by this prospectus includes, without limitation, through:

- through agents to the public or to investors;
- to one or more underwriters for resale to the public or to investors;
- a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction;
- purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account;
- ordinary brokerage transactions and transactions in which a broker solicits purchasers;
- directly to investors in privately negotiated transactions;
- directly to a purchaser pursuant to what is known as an “equity line of credit” as described below; or
- through a combination of these methods of sale.

A prospectus supplement or supplements with respect to each series of securities will describe the terms of the offering, including, to the extent applicable:

- the terms of the offering;
- the name or names of the underwriters or agents and the amounts of securities underwritten or purchased by each of them, if any;
- the public offering price or purchase price of the securities or other consideration therefor, and the proceeds to be received by us from the sale;
- any delayed delivery requirements;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation;
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

The offer and sale of the securities described in this prospectus by us, the underwriters or the third parties described above may be effected from time to time in one or more transactions, including privately negotiated transactions, either:

- at a fixed price or prices, which may be changed;
- in an "at the market" offering within the meaning of Rule 415(a)(4) of the Securities Act of 1933, as amended, or the Securities Act;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Only underwriters named in the prospectus supplement will be underwriters of the securities offered by the prospectus supplement.

Underwriters and Agents; Direct Sales

If underwriters are used in a sale, they will acquire the offered securities for their own account and may resell the offered securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate.

Unless the prospectus supplement states otherwise, the obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than securities covered by any over-allotment option. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may also sell securities pursuant to an “equity line of credit”. In such event, we will enter into a common stock purchase agreement with the purchaser to be named therein, which will be described in a Current Report on Form 8-K that we will file with the SEC. In that Form 8-K, we will describe the total amount of securities that we may require the purchaser to purchase under the purchase agreement and the other terms of purchase, and any rights that the purchaser is granted to purchase securities from us. In addition to our issuance of shares of common stock to the equity line purchaser pursuant to the purchase agreement, this prospectus (and the applicable prospectus supplement or post-effective amendment to the registration statement of which this prospectus forms a part) also covers the resale of those shares from time to time by the equity line purchaser to the public. The equity line purchaser will be considered an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. Its resales may be effected through a number of methods, including without limitation, ordinary brokerage transactions and transactions in which the broker solicits purchasers and block trades in which the broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction. The equity line purchaser will be bound by various anti-manipulation rules of the SEC and may not, for example, engage in any stabilization activity in connection with its resales of our securities and may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities other than as permitted under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

Dealers

We may sell the offered securities to dealers as principals. The dealer may then resell such securities to the public either at varying prices to be determined by the dealer or at a fixed offering price agreed to with us at the time of resale.

Institutional Purchasers

We may authorize agents, dealers or underwriters to solicit certain institutional investors to purchase offered securities on a delayed delivery basis pursuant to delayed delivery contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement or other offering materials, as the case may be, will provide the details of any such arrangement, including the offering price and commissions payable on the solicitations.

We will enter into such delayed contracts only with institutional purchasers that we approve. These institutions may include commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions.

Indemnification; Other Relationships

We may provide agents, underwriters, dealers and remarketing firms with indemnification against certain civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents, underwriters, dealers and remarketing firms, and their affiliates, may engage in transactions with, or perform services for, us in the ordinary course of business. This includes commercial banking and investment banking transactions.

Market-Making; Stabilization and Other Transactions

There is currently no market for any of the offered securities, other than our common stock, which is quoted on the Nasdaq Capital Market. If the offered securities are traded after their initial issuance, they may trade at a discount from their initial offering price, depending upon prevailing interest rates, the market for similar securities and other factors. While it is possible that an underwriter could inform us that it intends to make a market in the offered securities, such underwriter would not be obligated to do so, and any such market-making could be discontinued at any time without notice. Therefore, no assurance can be given as to whether an active trading market will develop for the offered securities. We have no current plans for listing of the debt securities, preferred stock, warrants or subscription rights on any securities exchange or quotation system; any such listing with respect to any particular debt securities, preferred stock, warrants or subscription rights will be described in the applicable prospectus supplement or other offering materials, as the case may be.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters or agents that are qualified market makers on the Nasdaq Capital Market may engage in passive market making transactions in our common stock on the Nasdaq Capital Market in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of our common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Fees and Commissions

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

DESCRIPTION OF SECURITIES WE MAY OFFER

General

This prospectus describes the general terms of our capital stock. The following description is not complete and may not contain all the information you should consider before investing in our capital stock. For a more detailed description of these securities, you should read the applicable provisions of Delaware law and our certificate of incorporation, as amended, referred to herein as our certificate of incorporation, and our amended and restated bylaws, referred to herein as our bylaws. When we offer to sell a particular series of these securities, we will describe the specific terms of the series in a supplement to this prospectus. Accordingly, for a description of the terms of any series of securities, you must refer to both the prospectus supplement relating to that series and the description of the securities described in this prospectus. To the extent the information contained in the prospectus supplement differs from this summary description, you should rely on the information in the prospectus supplement.

The total number of shares of capital stock we are authorized to issue is 525,000,000 shares, of which (1) 500,000,000 shares are common stock, par value \$0.0001 per share (or common stock) and (2) 25,000,000 shares are preferred stock, par value \$0.0001 per share (or preferred stock), which may, at the sole discretion of our board of directors be issued in one or more series.

We, directly or through agents, dealers or underwriters designated from time to time, may offer, issue and sell, together or separately, up to \$100,000,000 in the aggregate of:

- common stock;
- preferred stock;
- warrants to purchase common stock, preferred stock, debt securities, other securities or any combination of those securities;
- subscription rights to purchase common stock, preferred stock, debt securities, other securities or any combination of those securities;

- secured or unsecured debt securities consisting of notes, debentures or other evidences of indebtedness which may be senior debt securities, senior subordinated debt securities or subordinated debt securities, each of which may be convertible into equity securities;
- purchase contracts, including contracts obligating holders to purchase from or sell to us, and obligating us to sell to or purchase from the holders, common stock, preferred stock, debt securities, other securities or any combination of those securities at a future date or dates; or
- units comprised of, or other combinations of, the foregoing securities.

We may issue the debt securities as exchangeable for or convertible into shares of common stock, preferred stock or other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing. The preferred stock may also be exchangeable for and/or convertible into shares of common stock, another series of preferred stock or other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing. The securities being registered hereunder also include such indeterminate amount of securities as may be issued upon exercise, settlement, exchange or conversion of the securities of each identified class above as may from time to time be offered or sold hereunder, or pursuant to the antidilution provisions of any such securities. When a particular series of securities is offered, a supplement to this prospectus will be delivered with this prospectus, which will set forth the terms of the offering and sale of the offered securities.

Outstanding Capital Stock

As of November 7, 2022, the Company had issued and outstanding:

- 33,930,812 shares of common stock;
- 48,100 shares of Series A preferred stock; and
- No shares of Series B-1, Series B-2, Series C, Series D, Series D-1, Series E, Series F, Series G, Series H, Series I, Series J, Series J-1 or Series K preferred stock.

Market, Symbol and Transfer Agent

Our common stock is listed for trading on the Nasdaq Capital Market under the symbol “ASTI”. The transfer agent and registrar for our common stock is Computershare Investor Services.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our Board out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. Each outstanding share of common stock is duly and validly issued, fully paid and non-assessable.

Preferred Stock

Our Board is authorized by our charter to establish classes or series of preferred stock and fix the designation, powers, preferences and rights of the shares of each such class or series and the qualifications, limitations or restrictions thereof without any further vote or action by our stockholders. Any shares of preferred stock so issued could have priority over our common stock with respect to dividend or liquidation rights. Any future issuance of preferred stock may have the effect of delaying, deferring or preventing a change in our control without further action by our stockholders and may adversely affect the voting and other rights of the holders of our common stock.

Newly designated preferred stock may be offered by this prospectus and supplements thereto.

We will fix the rights, preferences, privileges and restrictions of the preferred stock of each series in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. This description will include any or all of the following, as required:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- any contractual limitations on our ability to declare, set aside or pay any dividends;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- 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 the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be voting rights, if any, of the preferred stock;
- calculated, and the exchange period;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, after receipt of payment therefor, the shares will be fully paid and non-assessable.

The Delaware General Corporation Law provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights provided for in the applicable certificate of designation.

The issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could be used to discourage an unsolicited acquisition proposal. For instance, the issuance of a series of preferred stock might impede a business combination by including class voting rights that would enable a holder to block such a transaction. In addition, under certain circumstances, the issuance of preferred stock could adversely affect the voting power of holders of our common stock. Although our Board is required to make any determination to issue preferred stock based on its judgment as to the best interests of our stockholders, our Board could act in a manner that would discourage an acquisition attempt or other transaction that some, or a majority, of our stockholders might believe to be in their best interests or in which such stockholders might receive a premium for their stock over the then market price of such stock.

Warrants

We may issue warrants to purchase our securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing and may be attached to, or separate from, such securities. To the extent warrants that we issue are to be publicly-traded, each series of such warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the warrant and warrant agreement, if any. The prospectus supplement relating to any warrants that we may offer will contain the specific terms of the warrants and a description of the material provisions of the applicable warrant agreement, if any. These terms may include the following:

- the title of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the securities or other rights for which the warrants are exercisable;
- the designation and terms of the other securities, if any, with which the warrants are to be issued and the number of warrants issued with each other security;
- the aggregate number of warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which the securities or other rights purchasable upon exercise of the warrants may be purchased;
- if applicable, the date on and after which the warrants and the securities or other rights purchasable upon exercise of the warrants will be separately transferable;
- a discussion of any material U.S. federal income tax considerations applicable to the exercise of the warrants;
- the date on which the right to exercise the warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of warrants that may be exercised at any time;
- information with respect to book-entry procedures, if any; and
- any other 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 of warrants to purchase the amount of securities or other rights, at the exercise price stated or determinable in the prospectus supplement for the warrants. Warrants may be exercised at any time up to the close of business on the expiration date shown in the applicable prospectus supplement, unless otherwise specified in such prospectus supplement. After the close of business on the expiration date, if applicable, unexercised warrants will become void. Warrants may be exercised in the manner described in the applicable prospectus supplement. When the warrant holder makes the payment and properly completes and signs the warrant certificate at the corporate trust office of the warrant agent, if any, or any other office indicated in the prospectus supplement, we will, as soon as possible, forward the securities or other rights that the warrant holder has purchased. If the warrant holder exercises less than all of the warrants represented by the warrant certificate, we will issue a new warrant certificate for the remaining warrants.

Subscription Rights

We may issue rights to purchase our securities. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to holders of our capital stock a prospectus supplement will be distributed to such holders on the record date for receiving rights in the rights offering set by us.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, forms of the subscription rights, standby underwriting agreement or other agreements, if any. The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate amount of securities purchasable upon exercise of the rights;
- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase the principal amount of securities at the exercise price set forth 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. After the close of business on the expiration date, all unexercised rights will become void.

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, if any, or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities 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 underwriting arrangements, as described in the applicable prospectus supplement.

Debt Securities

As used in this prospectus, the term “debt securities” means the debentures, notes, bonds and other evidences of indebtedness that we may issue from time to time. The debt securities will either be senior debt securities, senior subordinated debt or subordinated debt securities. We may also issue convertible debt securities. Debt securities may be issued under an indenture (which we refer to herein as an Indenture), which are contracts entered into between us and a trustee to be named therein. The Indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part. We may issue debt securities and incur additional indebtedness other than through the offering of debt securities pursuant to this prospectus. It is likely that convertible debt securities will not be issued under an Indenture.

The debt securities may be fully and unconditionally guaranteed on a secured or unsecured senior or subordinated basis by one or more guarantors, if any. The obligations of any guarantor under its guarantee will be limited as necessary to prevent that guarantee from constituting a fraudulent conveyance under applicable law. In the event that any series of debt securities will be subordinated to other indebtedness that we have outstanding or may incur, the terms of the subordination will be set forth in the prospectus supplement relating to the subordinated debt securities.

We may issue debt securities from time to time in one or more series, in each case with the same or various maturities, at par or at a discount. Unless indicated in a prospectus supplement, we may issue additional debt securities of a particular series without the consent of the holders of the debt securities of such series outstanding at the time of the issuance. Any such additional debt securities, together with all other outstanding debt securities of that series, will constitute a single series of debt securities under the applicable Indenture and will be equal in ranking.

Should an Indenture relate to unsecured indebtedness, in the event of a bankruptcy or other liquidation event involving a distribution of assets to satisfy our outstanding indebtedness or an event of default under a loan agreement relating to secured indebtedness of our company or its subsidiaries, the holders of such secured indebtedness, if any, would be entitled to receive payment of principal and interest prior to payments on the unsecured indebtedness issued under an Indenture.

Each prospectus supplement will describe the terms relating to the specific series of debt securities. These terms will include some or all of the following:

- the title of debt securities and whether the debt securities are senior or subordinated;
- any limit on the aggregate principal amount of debt securities of such series;
- the percentage of the principal amount at which the debt securities of any series will be issued;
- the ability to issue additional debt securities of the same series;
- the purchase price for the debt securities and the denominations of the debt securities;
- the specific designation of the series of debt securities being offered;
- the maturity date or dates of the debt securities and the date or dates upon which the debt securities are payable and the rate or rates at which the debt securities of the series shall bear interest, if any, which may be fixed or variable, or the method by which such rate shall be determined;
- the basis for calculating interest;
- the date or dates from which any interest will accrue or the method by which such date or dates will be determined;
- the duration of any deferral period, including the period during which interest payment periods may be extended;
- whether the amount of payments of principal of (and premium, if any) or interest on the debt securities may be determined with reference to any index, formula or other method, such as one or more currencies, commodities, equity indices or other indices, and the manner of determining the amount of such payments;
- the dates on which we will pay interest on the debt securities and the regular record date for determining who is entitled to the interest payable on any interest payment date;
- the place or places where the principal of (and premium, if any) and interest on the debt securities will be payable, where any securities may be surrendered for registration of transfer, exchange or conversion, as applicable, and notices and demands may be delivered to or upon us pursuant to the applicable Indenture;
- the rate or rates of amortization of the debt securities;
- any terms for the attachment to the debt securities of warrants, options or other rights to purchase or sell our securities;
- if the debt securities will be secured by any collateral and, if so, a general description of the collateral and the terms and provisions of such collateral security, pledge or other agreements;
- if we possess the option to do so, the periods within which and the prices at which we may redeem the debt securities, in whole or in part, pursuant to optional redemption provisions, and the other terms and conditions of any such provisions;
- our obligation or discretion, if any, to redeem, repay or purchase debt securities by making periodic payments to a sinking fund or through an analogous provision or at the option of holders of the debt securities, and the period or periods within which and the price or prices at which we will redeem, repay or purchase the debt securities, in whole or in part, pursuant to such obligation, and the other terms and conditions of such obligation;
- the terms and conditions, if any, regarding the option or mandatory conversion or exchange of debt securities;
- the period or periods within which, the price or prices at which and the terms and conditions upon which any debt securities of the series may be redeemed, in whole or in part at our option and, if other than by a board resolution, the manner in which any election by us to redeem the debt securities shall be evidenced;
- any restriction or condition on the transferability of the debt securities of a particular series;

- the portion, or methods of determining the portion, of the principal amount of the debt securities which we must pay upon the acceleration of the maturity of the debt securities in connection with any event of default;
- the currency or currencies in which the debt securities will be denominated and in which principal, any premium and any interest will or may be payable or a description of any units based on or relating to a currency or currencies in which the debt securities will be denominated;
- provisions, if any, granting special rights to holders of the debt securities upon the occurrence of specified events;
- any deletions from, modifications of or additions to the events of default or our covenants with respect to the applicable series of debt securities, and whether or not such events of default or covenants are consistent with those contained in the applicable Indenture;
- any limitation on our ability to incur debt, redeem stock, sell our assets or other restrictions;
- the application, if any, of the terms of the applicable Indenture relating to defeasance and covenant defeasance (which terms are described below) to the debt securities;
- what subordination provisions will apply to the debt securities;
- the terms, if any, upon which the holders may convert or exchange the debt securities into or for our securities or property;
- whether we are issuing the debt securities in whole or in part in global form;
- any change in the right of the trustee or the requisite holders of debt securities to declare the principal amount thereof due and payable because of an event of default;
- the depositary for global or certificated debt securities, if any;
- any material federal income tax consequences applicable to the debt securities, including any debt securities denominated and made payable, as described in the prospectus supplements, in foreign currencies, or units based on or related to foreign currencies;
- any right we may have to satisfy, discharge and defease our obligations under the debt securities, or terminate or eliminate restrictive covenants or events of default in the Indentures, by depositing money or U.S. government obligations with the trustee of the Indentures;
- the names of any trustees, depositories, authenticating or paying agents, transfer agents or registrars or other agents with respect to the debt securities;
- to whom any interest on any debt security shall be payable, if other than the person in whose name the security is registered, on the record date for such interest, the extent to which, or the manner in which, any interest payable on a temporary global debt security will be paid;
- if the principal of or any premium or interest on any debt securities is to be payable in one or more currencies or currency units other than as stated, the currency, currencies or currency units in which it shall be paid and the periods within and terms and conditions upon which such election is to be made and the amounts payable (or the manner in which such amount shall be determined);
- the portion of the principal amount of any debt securities which shall be payable upon declaration of acceleration of the maturity of the debt securities pursuant to the applicable Indenture;
- if the principal amount payable at the stated maturity of any debt security of the series will not be determinable as of any one or more dates prior to the stated maturity, the amount which shall be deemed to be the principal amount of such debt securities as of any such date for any purpose, including the principal amount thereof which shall be due and payable upon any maturity other than the stated maturity or which shall be deemed to be outstanding as of any date prior to the stated maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined); and
- any other specific terms of the debt securities, including any modifications to the events of default under the debt securities and any other terms which may be required by or advisable under applicable laws or regulations.

Unless otherwise specified in the applicable prospectus supplement, we do not anticipate the debt securities will be listed on any securities exchange. Holders of the debt securities may present registered debt securities for exchange or transfer in the manner described in the applicable prospectus supplement. Except as limited by the applicable Indenture, we will provide these services without charge, other than any tax or other governmental charge payable in connection with the exchange or transfer.

Debt securities may bear interest at a fixed rate or a variable rate as specified in the prospectus supplement. In addition, if specified in the prospectus supplement, we may sell debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate, or at a discount below their stated principal amount. We will describe in the applicable prospectus supplement any special federal income tax considerations applicable to these discounted debt securities.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by referring to one or more currency exchange rates, commodity prices, equity indices or other factors. Holders of such debt securities may receive a principal amount on any principal payment date, or interest payments on any interest payment date, that are greater or less than the amount of principal or interest otherwise payable on such dates, depending upon the value on such dates of applicable currency, commodity, equity index or other factors. The applicable prospectus supplement will contain information as to how we will determine the amount of principal or interest payable on any date, as well as the currencies, commodities, equity indices or other factors to which the amount payable on that date relates and certain additional tax considerations.

Purchase Contracts

We may issue purchase contracts, including contracts obligating holders to purchase from or sell to us, and obligating us to sell to or purchase from the holders, a specified number or aggregate value of shares of our common stock or preferred stock, debt securities, other securities or any combination of those securities at a future date or dates, which we refer to in this prospectus as purchase contracts. The price per share of common stock or preferred stock and the number of shares of each, or the aggregate amount of any debt securities, other securities or any combination thereof, may be fixed at the time the purchase contracts are issued or may be determined by reference to a specific formula set forth in the purchase contracts. The purchase contracts may be issued separately or as part of units.

The purchase contracts may require us to make periodic payments to the holders of units comprised in whole or in part of purchase contracts or vice versa, and these payments may be unsecured or prefunded on some basis. The purchase contracts may require holders to secure their obligations under those contracts in a specified manner, including pledging their interest in another purchase contract or other security.

The applicable prospectus supplement will describe the terms of the purchase contracts, including, if applicable, collateral or depositary arrangements.

Units

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we may issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent, if any, may be a bank or trust company that we select. We will indicate the name and address of the unit agent, if any, in the applicable prospectus supplement relating to a particular series of units. Specific unit agreements, if any, will contain additional important terms and provisions. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report that we file with the SEC, the form of unit and the form of each unit agreement, if any, relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

August 2022 Outstanding Warrants

On August 19, 2022, the Company conducted a private placement in which it entered into a subscription agreement with an institutional investor for the sale of units (the “Units”) at a fixed price of \$5.30 per Unit. Each Unit consists of (i) one share of common stock and (ii) Warrants exercisable for 1.5 shares of common stock. Each Warrant will be exercisable for five years (until August 19, 2027) at an exercise price of \$5.30 per one share of common stock. The holder may not exercise the Warrants to the extent that, after giving effect to such exercise, the holder would beneficially own in excess of 9.99% of the shares of common stock outstanding, or, at the holder’s election on not less than 61 days’ notice, 19.99%. The Warrants are exercisable for cash. If, at the time the holder exercises any Warrants, a registration statement registering the issuance of the shares of common stock underlying the Warrants is not then effective or available for the issuance of such shares, then the Warrants may be net exercised on a cashless basis according to a formula set forth in the Warrants.

As of the date of this prospectus there are 1,415,095 warrants outstanding.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Certificate of Incorporation and Bylaws

Our charter and bylaws contain a number of provisions that could make our acquisition by means of a tender or exchange offer, a proxy contest or otherwise more difficult. These provisions are summarized below.

Board Composition; Removal of Directors and Filling Board Vacancies

Our charter provides that stockholders may remove directors only for cause and only by the affirmative vote of the holders of at least a majority of the shares entitled to vote at an election of directors.

Our bylaws authorize only our Board fill vacant directorships, including newly created seats. In addition, the number of directors constituting our Board may only be set by a resolution adopted by a majority vote of our entire Board. These provisions would prevent a stockholder from increasing the size of our Board and then gaining control of our Board by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our Board but promotes continuity of management.

Staggered Board

Our Board is divided into three classes, with one class of directors elected at each year’s annual stockholders meeting. Staggered terms tend to protect against sudden changes in management and may have the effect of delaying, deferring or preventing a change in our control without further action by our stockholders.

Advance Notice Requirements

Our bylaws provide advance notice procedures for stockholders seeking to bring matters before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our bylaws also specify certain requirements regarding the form and content of a stockholder’s notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions might also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of our company.

Special Meetings

Our bylaws provide that special meetings of stockholders may only be called at the request of a majority of the Board, and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders.

Undesignated Preferred Stock

Our charter provides for 25,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our Board to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our Board were to determine that a takeover proposal is not in the best interests of our stockholders, our Board could cause shares of convertible preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our charter grants our Board broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our Board approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the 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 voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our Board and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge, exchange, mortgage or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Limitation on Liability and Indemnification of Directors and Officers

Our certificate of incorporation provides that all directors, officers, employees and agents of the registrant shall be entitled to be indemnified by us to the fullest extent permitted by Section 145 of the Delaware General Corporation Law, or the DGCL.

Section 145 of the Delaware General Corporation Law concerning indemnification of officers, directors, employees and agents is set forth below.

“Section 145. Indemnification of officers, directors, employees and agents; insurance.

(a) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.

(b) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

(c) To the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of this section, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

(d) Any indemnification under subsections (a) and (b) of this section (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in subsections (a) and (b) of this section. Such determination shall be made, with respect to a person who is a director or officer of the corporation at the time of such determination: (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.

(e) Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative or investigative action, suit or proceeding may be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the corporation as authorized in this section. Such expenses (including attorneys' fees) incurred by former officers and directors or other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems appropriate.

(f) The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this section shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to the certificate of incorporation or the bylaws after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, suit or proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.

(g) A corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under this section.

(h) For purposes of this section, references to "the corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this section with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued.

(i) For purposes of this section, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to any employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.

(j) The indemnification and advancement of expenses provided by, or granted pursuant to, this section shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(k) The Court of Chancery is hereby vested with exclusive jurisdiction to hear and determine all actions for advancement of expenses or indemnification brought under this section or under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. The Court of Chancery may summarily determine a corporation's obligation to advance expenses (including attorneys' fees).

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. In the event that a claim for indemnification against such liabilities (other than the payment of expenses incurred or paid by a director, officer or controlling person in a successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to the court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

In accordance with Section 102(b)(7) of the DGCL, our certificate of incorporation provides that no director shall be personally liable to us or any of our stockholders for monetary damages resulting from breaches of their fiduciary duty as directors, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived any improper personal benefit. The effect of this provision of our certificate of incorporation is to eliminate our rights and those of our stockholders (through stockholders' derivative suits on our behalf) to recover monetary damages against a director for breach of the fiduciary duty of care as a director, including breaches resulting from negligent or grossly negligent behavior, except, as restricted by Section 102(b)(7) of the DGCL. However, this provision does not limit or eliminate our rights or the rights of any stockholder to seek non-monetary relief, such as an injunction or rescission, in the event of a breach of a director's duty of care.

If the DGCL is amended to authorize corporate action further eliminating or limiting the liability of directors, then, in accordance with our certificate of incorporation, the liability of our directors to us or our stockholders will be eliminated or limited to the fullest extent authorized by the DGCL, as so amended. Any repeal or amendment of provisions of our certificate of incorporation limiting or eliminating the liability of directors, whether by our stockholders or by changes in law, or the adoption of any other provisions inconsistent therewith, will (unless otherwise required by law) be prospective only, except to the extent such amendment or change in law permits us to further limit or eliminate the liability of directors on a retroactive basis.

To the fullest extent permitted by applicable law, our certificate of incorporation also provides that we are authorized to provide indemnification of (and advancement of expenses to) such agents (and any other persons to which Delaware law permits the Company to provide indemnification) through bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the DGCL, subject only to limits created by applicable Delaware law (statutory or non-statutory), with respect to actions for breach of duty to this Corporation, its stockholders, and others.

Any repeal or modification of provisions of our certificate of incorporation affecting indemnification rights will not adversely affect any right or protection of a director, officer, agent or other person existing at the time of, or increase the liability of any director of the Company with respect to any acts or omissions of such director, officer or agent occurring prior to such repeal or modification.

The bylaws of the Company provide for the broad indemnification by the directors and officers of the Company and for advancement of litigation expenses to the fullest extent permitted by current Delaware law. Any repeal or amendment of provisions of our bylaws affecting indemnification rights will (unless otherwise required by law) be prospective only, except to the extent such amendment or change in law permits us to provide broader indemnification rights on a retroactive basis, and will not in any way diminish or adversely affect any right or protection existing thereunder with respect to any act or omission occurring prior to such repeal or amendment or adoption of such inconsistent provision.

The right to indemnification is a contract right that includes the right to be paid by us the expenses incurred in defending or otherwise participating in any proceeding referenced above in advance of its final disposition, provided, however, that if the DGCL requires, an advancement of expenses incurred by our officer or director (solely in the capacity as an officer or director of our corporation) will be made only upon delivery to us of an undertaking, by or on behalf of such officer or director, to repay all amounts so advanced if it is ultimately determined that such person is not entitled to be indemnified for such expenses.

The rights to indemnification and advancement of expenses will not be deemed exclusive of any other rights which any person covered by our certificate of incorporation may have or hereafter acquire under law, our certificate of incorporation, our bylaws, an agreement, vote of stockholders or disinterested directors, or otherwise.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus will be passed upon for us by Carroll Legal LLC, Denver, Colorado. If legal matters in connection with offerings made by this prospectus are passed on by counsel for the underwriters, dealers or agents, if any, that counsel will be named in the applicable prospectus supplement.

EXPERTS

Our balance sheets as of December 31, 2021 and 2020 and the related statement of operations, changes in statement of stockholders' equity and statement of cash flows for the years ended December 31, 2021 and 2020, incorporated in this prospectus by reference have been audited by Haynie & Company, independent registered public accounting firm, with respect thereto, and has been so included in reliance upon the report of such firm given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly and other periodic reports, proxy statements and other information with the Securities and Exchange Commission using the Commission's EDGAR system. The Commission maintains a web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. The address of such site is <http://www.sec.gov>.

INCORPORATION OF DOCUMENTS BY REFERENCE

We are "incorporating by reference" in this prospectus certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information. We have filed or may file the following documents with the SEC and they are incorporated herein by reference as of their respective dates of filing:

1. Our Annual Report on [Form 10-K](#) for the year ended December 31, 2021 (our "Annual Report"), filed with the SEC on March 14, 2022.
2. Our Quarterly Reports on Form 10-Q for the three months ended [March 31, 2022](#) and [June 30, 2022](#) (our "Quarterly Reports"), filed with the SEC.
3. Our Current Reports on Form 8-K filed with the SEC on [February 2, 2022](#), [February 8, 2022](#), [August 8, 2022](#), [August 12, 2022](#), [August 19, 2022](#), [September 12, 2022](#), [September 22, 2022](#), and [September 27, 2022](#).
4. The description of our Common Stock obtained in our Registration Statement on [Form 8-A](#) filed with the SEC on August 16, 2022, including any amendment or report filed for the purpose of updating such information.

All documents that we file with the SEC pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act subsequent to the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement that indicates that all securities offered under this prospectus have been sold, or that deregisters all securities then remaining unsold, will be deemed to be incorporated in this registration statement by reference and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus, or in any subsequently filed document that also is deemed to be incorporated by reference in this prospectus, modifies, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus. None of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K or any corresponding information, either furnished under Item 9.01 or included as an exhibit therein, that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus, except as otherwise expressly set forth in the relevant document. Subject to the foregoing, all information appearing in this prospectus is qualified in its entirety by the information appearing in the documents incorporated by reference.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporated by reference), by contacting Jin Jo, c/o Ascent Solar Technologies, Inc., at 12300 Grant Street, Thornton, Colorado 80241. Our telephone number is (720) 872-5000. Information about us is also available at our website at <https://www.ascentsolar.com>. However, the information in our website is not a part of this prospectus and is not incorporated by reference.

ASCENT SOLAR TECHNOLOGIES, INC.

Up to \$4,344,000

Common Stock

PROSPECTUS SUPPLEMENT

H.C. Wainwright & Co.

May 23, 2024