Filed Pursuant to Rule 424(b)(3)
Registration No. 333-257931

PROSPECTUS SUPPLEMENT NO. 2
(To the Prospectus dated July 30, 2021)

Up to 88,982,474 Shares of Common Stock
(Including up to 35,476,667 Shares of Common Stock Issuable Upon Exercise of Warrants)
Up to 11,326,667 Warrants to Purchase Common Stock

This prospectus supplement supplements the prospectus, dated July 30, 2021 (as amended or supplemented, the "**Prospectus**"), which forms a part of our registration statement on Form S-1 (No. 333-257931). This prospectus supplement is being filed to update and supplement the information in the Prospectus with the information contained in our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 16, 2021 (the "**Quarterly Report**"). Accordingly, we have attached the Quarterly Report to this prospectus supplement.

The Prospectus and prospectus supplement relate to the issuance by us of an aggregate of up to 35,476,667 shares of our common stock, $0.0001 par value per share (the "**Common Stock**"), which consists of:

- up to 11,326,667 shares of Common Stock that are issuable upon the exercise of 11,326,667 warrants (the "**Private Placement Warrants**") originally issued in a private placement to the initial stockholder of Artius Acquisition Inc. (the "**Sponsor**") in connection with the initial public offering of Artius Acquisition Inc. ("**Artius**"), and
- up to 24,150,000 shares of Common Stock that are issuable upon the exercise of 24,150,000 warrants (the "**Public Warrants**" and, together with the Private Placement Warrants, the "**Warrants**") originally issued in the initial public offering of Artius.

We will receive the proceeds from any exercise of any Warrants for cash.

The Prospectus and prospectus supplement also relate to the offer and sale from time to time by the selling securityholders named in the Prospectus or their permitted transferees (the "**selling securityholders**") of:

- up to 64,832,474 shares of Common Stock consisting of:
  - up to 20,000,000 shares of Common Stock issued in a private placement pursuant to subscription agreements ("**Subscription Agreements**") entered into on February 16, 2021,
  - up to 18,112,500 shares of Common Stock held by the Sponsor issued in a private placement in connection with the initial public offering of Artius and subsequent share recapitalization (including 4,500,000 shares of Common Stock subject to forfeiture if certain milestone are not achieved, as further described below),
  - up to 11,326,667 shares of Common Stock issuable upon exercise of the Private Placement Warrants,
  - up to 6,398,350 shares of Common Stock issuable upon the exercise of stock options,
  - up to 3,000,000 shares of Common Stock issued by us pursuant to that certain Backstop Agreement ("**Backstop Agreement**") entered into on June 14, 2021,
  - up to 1,300,001 shares of Common Stock issued by us pursuant to those certain Additional Subscription Agreements ("**Additional Subscription Agreements**"), each entered into on June 23, 2021, and
  - up to 4,694,956 shares of Common Stock issued pursuant to Agreement and Plan of Merger and Reorganization, dated as of February 16, 2021 (as amended by the letter agreement dated March 5, 2021), by and among Artius, Zero Carbon Merger Sub Inc. and Micromidas, Inc. and subject to that certain Investor Rights Agreement (the "**Investor Rights Agreement**"), dated June 25, 2021, between us and certain selling securityholders granting such holders registration rights with respect to such shares (including up to 2,150,784 shares of Common Stock issuable as Earnout Shares (as defined in the Prospectus)), and
  - up to 11,326,667 Private Placement Warrants.

We will not receive any proceeds from the sale of shares of Common Stock or Warrants by the selling securityholders pursuant to the Prospectus.

The selling securityholders may offer, sell or distribute all or a portion of the securities hereby registered publicly or through private transactions at prevailing market prices or at negotiated prices. We will not receive any of the proceeds from such sales of the shares of Common Stock or Warrants, except with respect to amounts received by us upon exercise of the Warrants. We will bear all costs, expenses and fees in connection with the registration of these securities, including with regard to compliance with state securities or "blue sky" laws. The selling securityholders will bear all commissions and discounts, if any, attributable to their sale of shares of Common Stock or Warrants. See the section titled "*Plan of Distribution*" in the Prospectus.

The Common Stock and Public Warrants are listed on The Nasdaq Capital Market ("**Nasdaq**") under the symbols "ORGN" and "ORGNW," respectively. On August 13, 2021, the last reported sales price of Common Stock was $6.61 per share and the last reported sales price of our Warrants was $1.74 per Warrant.

This prospectus supplement should be read in conjunction with the Prospectus, including any amendments or supplements thereto, which is to be delivered with this prospectus supplement. This prospectus supplement is qualified by reference to the Prospectus, including any amendments or

supplements thereto, except to the extent that the information in this prospectus supplement updates and supersedes the information contained therein.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any amendments or supplements thereto.

We are an "emerging growth company" and a "smaller reporting company" as defined under U.S. federal securities laws and, as such, have elected to comply with reduced public company reporting requirements. The Prospectus complies with the requirements that apply to an issuer that is an emerging growth company and a smaller reporting company. We are incorporated in Delaware.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described in the section titled "Risk Factors" beginning on page 8 of the Prospectus, and under similar headings in any amendments or supplements to the Prospectus.

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

Prospectus Supplement dated
August 16, 2021

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2021

OR

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

For the transition period from to

Commission file number 001-39378

ORIGIN MATERIALS, INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**87-1388928** **(I.R.S. Employer Identification No.)**
930 Riverside Parkway, Suite 10 **West Sacramento, CA** **(Address of principal executive offices)**	**95605** **(Zip Code)**

(916) 231-9329
(Registrant's telephone number, including area code)

N/A
(Former name or former address, if changed since last report)

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

Title of each class:	Trading Symbol(s)	Name of each exchange on which registered:
Common Stock, $0.0001 par value per share	**ORGN**	**The NASDAQ Capital Market**
Warrants	**ORGNW**	**The NASDAQ Capital Market**

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

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

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

The number of shares of the registrant's Common Stock, par value $0.0001 per share outstanding was 141,248,470, as of August 13, 2021.

ORIGIN MATERIALS, INC.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The Company makes forward-looking statements in this Quarterly Report on Form 10-Q (this "Report") and in documents incorporated herein by reference. All statements, other than statements of present or historical fact included in or incorporated by reference in this Report, regarding the Company's future financial performance, as well as the Company's strategy, future operations, financial position, estimated revenues, and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this Report, the words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "will," "would" the negative of such terms and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on management's current expectations, assumptions, hopes, beliefs, intentions and strategies regarding future events and are based on currently available information as to the outcome and timing of future events. The Company cautions you that these forward-looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond the control of the Company, incident to its business.

These forward-looking statements are based on information available as of the date of this Report, and current expectations, forecasts and assumptions, and involve a number of risks and uncertainties. Accordingly, forward-looking statements in this Report and in any document incorporated herein by reference should not be relied upon as representing the Company's views as of any subsequent date, and the Company does not undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

As a result of a number of known and unknown risks and uncertainties, the Company's actual results or performance may be materially different from those expressed or implied by these forward-looking statements. Some factors that could cause actual results to differ include:

- any further changes to the Company's financial statements or this Report that may be required due to SEC comments or further guidance regarding the accounting treatment of the Assumed Common Stock Warrants (as defined in Note 15 to the unaudited condensed consolidated financial statements in this Report);
- the effectiveness of the Company's disclosure controls and procedures and internal control over financial reporting;
- the Company's ability to remediate the material weakness in its internal control over financial reporting;
- the quantitative effects of the restatement of our previously issued consolidated financial statements as of and for the period ended December 31, 2020;
- costs related to the Business Combination (as defined herein) and the Company's ability to recognize the anticipated benefits of the Business Combination;
- the Company's future financial and business performance, including financial projections and business metrics;
- changes in the Company's strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects and plans;
- the Company's ability to scale in a cost-effective manner;
- the Company's ability to raise capital;
- the Company's ability to secure additional project financing and government incentives;
- the Company's ability to complete construction of its plants in the expected timeframe and in a cost-effective manner;
- the Company's ability to procure necessary capital equipment and to produce its products in large commercial quantities;
- the impact of government laws and regulations and liabilities thereunder, including any decline in the value of carbon credits;
- any increases or fluctuations in raw material costs;

- the ability to maintain the listing of the Company’s common stock on the Nasdaq; and
- the impact of worldwide economic, political, industry, and market conditions, including the continued effects of the global COVID-19 pandemic.

Other risks and uncertainties set forth in this Report, including risk factors discussed in Item 1A under the heading, “Risk Factors”.

PART I. — FINANCIAL INFORMATION

Item 1. Financial Statements

ORIGIN MATERIALS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data)	June 30, 2021 (Unaudited)	December 31, 2020
ASSETS		
Current assets		
Cash and cash equivalents	$ 470,312	$ 1,309
Restricted cash	565	565
Other receivables	160	48
Grants receivable	17	—
Prepaid expenses and other current assets	214	144
Total current assets	471,268	2,066
Property, plant, and equipment, net	48,854	45,104
Intangible assets, net	242	258
Total assets	**$ 520,364**	**$ 47,428**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 966	$ 2,700
Accrued expenses	861	593
Derivative liability	—	1,239
Stockholder convertible notes payable	—	3,232
Total current liabilities	1,827	7,764
PPP Loan	—	906
Earnout liability	157,585	—
Canadian Government Research and Development Program Liability	6,370	6,197
Redeemable convertible preferred stock warrants	—	19,233
Assumed common stock warrants liability	69,180	—
Stockholder note	5,189	5,189
Related party other liabilities, long-term	5,615	5,517
Other liabilities, long-term	3,109	2,500
Total liabilities	248,875	47,306
Commitments and contingencies (See Note 18)		
STOCKHOLDERS' EQUITY		
Preferred stock, $0.0001 par value, 10,000,000 shares authorized; no shares issued and outstanding as of June 30, 2021 and December 31, 2020	—	—
Common stock, $0.0001 par value, 1,000,000,000 shares authorized; 136,748,470 and 70,266,925, issued and outstanding as of June 30, 2021 and December 31, 2020, respectively	13	6
Additional paid-in capital	359,928	98,620
Accumulated deficit	(89,928)	(98,888)
Accumulated other comprehensive income	1,476	384
Total stockholders' equity	271,489	122
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	**$ 520,364**	**$ 47,428**

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

ORIGIN MATERIALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(Unaudited)

(In thousands, except share and per share data)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Operating Expenses				
Research and development	$ 2,339	$ 904	$ 3,648	$ 2,122
General and administrative	4,219	703	8,167	1,302
Depreciation and amortization	121	100	236	204
Total operating expenses and loss from operations	6,679	1,707	12,051	3,628
Other (income) expenses				
Interest expense, net of capitalized interest	2,560	50	2,839	113
Change in fair value of derivative liability	1,035	(12)	1,426	(15)
Change in fair value of warrants liability	(27,265)	105	20,844	105
Change in fair value of earnout liability	(45,497)	—	(45,497)	—
Other income, net	(43)	(157)	(623)	(168)
Total other (income) expenses, net	(69,210)	(14)	(21,011)	35
Net income (loss)	62,531	(1,693)	8,960	(3,663)
Other comprehensive income (loss)				
Foreign currency translation adjustment, net of tax	626	5,803	1,092	2,603
Total comprehensive income (loss)	63,157	4,110	10,052	(1,060)
Net income (loss) per share, basic	$ 0.93	$ (0.03)	$ 0.14	$ (0.06)
Net income (loss) per share, diluted	$ 0.63	$ (0.03)	$ 0.13	$ (0.06)
Weighted-average common shares outstanding, basic	67,548,052	62,545,293	65,098,310	62,544,604
Weighted-average common shares outstanding, diluted	78,628,591	62,545,293	70,974,743	62,544,604

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

ORIGIN MATERIALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY
(Unaudited)
(In Thousands, Except Share Amounts)

	Redeemable Convertible Preferred Stock						Legacy Origin Common Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (loss)	Total Stockholders' Equity
	Series A		Series B		Series C									
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
BALANCE, December 31, 2019 (as previously reported)	13,204,284	$ 31,478	6,275,704	$ 41,125	1,590,675	$ 23,380	1,283,788	$ —	—	$ —	$ 1,011	$ (68,585)	$ (410)	$ (67,984)
Retrospective application of the recapitalization due to the Business Combination (Note 4)	(13,204,284)	(31,478)	(6,275,704)	(41,125)	(1,590,675)	(23,380)	(1,283,788)	—	62,542,363	6	95,977	—	—	95,983
Balance at December 31. 2019, effect of Business Combination (Note 4)	—	—	—	—	—	—	—	—	62,542,363	6	96,988	(68,585)	(410)	27,999
Common stock issued upon exercise of stock options	—	—	—	—	—	—	—	—	2,912	—	1	—	—	1
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	9	—	—	9
Net loss	—	—	—	—	—	—	—	—	—	—	—	(1,970)	—	(1,970)
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	-	(3,200)	(3,200)
BALANCE, March 31, 2020	—	—	—	—	—	—	—	—	62,545,275	$ 6	$ 96,998	$ (70,555)	$ (3,610)	$ 22,839
Common stock issued upon exercise of stock options	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	9	—	—	9
Net loss	—	—	—	—	—	—	—	—	—	—	—	(1,693)	—	(1,693)
Other comprehensive income	—	—	—	—	—	—	—	—	—	—	—	—	5,803	5,803
BALANCE, June 30, 2020	—	—	—	—	—	—	—	—	62,545,275	$ 6	$ 97,007	$ (72,248)	$ 2,193	$ 26,958

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

ORIGIN MATERIALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS’ EQUITY (continued)
(Unaudited)
(In Thousands, Except Share Amounts)

	Redeemable Convertible Preferred Stock													
	Series A		Series B		Series C		Common Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (loss)	Total Stockholders’ Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
BALANCE, December 31, 2020 (as previously reported)	13,204,284	$ 31,478	6,275,704	$ 41,125	1,590,675	$ 23,380	1,285,164	—	—	$ —	$ 2,643	$ (98,888)	$ 384	$ (95,861)
Retrospective application of the recapitalization due to the Business Combination (Note 4)	(13,204,284)	(31,478)	(6,275,704)	(41,125)	(1,590,675)	(23,380)	(1,285,164)	—	62,545,275	6	95,977	—	—	95,983
Balance at December 31. 2020, effect of Business Combination (Note 4)	—	—	—	—	—	—	—	—	62,545,275	6	98,620	(98,888)	384	122
Common stock issued upon exercise of stock options	—	—	—	—	—	—	—	—	118,019	—	55	—	—	55
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	627	—	—	627
Net loss	—	—	—	—	—	—	—	—	—	—	—	(53,571)	—	(53,571)
Other comprehensive income	—	—	—	—	—	—	—	—	—	—	—	—	466	466
BALANCE, March 31, 2021	—	—	—	—	—	—	—	—	62,663,294	$ 6	$ 99,302	$ (152,459)	$ 850	$ (52,301)
Reclassification of stockholders’ convertible notes payable	—	—	—	—	—	—	—	—	2,049,191	—	20,493	—	—	20,493
Reclassification of redeemable convertible preferred stock warrant liability	—	—	—	—	—	—	—	—	5,554,440	—	54,267	—	—	54,267
Business Combination, net of redemptions and equity issuance costs of $37 million	—	—	—	—	—	—	—	—	66,481,545	7	385,403	—	—	385,410
Reclassification of equity to liability related to earn out provisions of Business Combination (see note 13)	—	—	—	—	—	—	—	—	—	—	(203,082)	—	—	(203,082)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	3,545	—	—	3,545
Net income	—	—	—	—	—	—	—	—	—	—	—	62,531	—	62,531
Other comprehensive income	—	—	—	—	—	—	—	—	—	—	—	—	626	626
BALANCE, June 30, 2021	—	—	—	—	—	—	—	—	136,748,470	$ 13	$ 359,928	$ (89,928)	$ 1,476	$ 271,489

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

ORIGIN MATERIALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(in thousands)	Six Months Ended June 30, 2021	2020
Cash flows from operating activities		
Net income (loss)	$ 8,960	$(3,663)
Adjustments to reconcile net loss to net cash from operating activities:		
Depreciation and amortization	236	204
Stock-based compensation	4,172	18
Amortization of debt issuance costs	14	130
Accretion of debt discount	2,211	40
Change in fair value of derivative liability	1,426	(15)
Change in fair value of warrants liability	20,844	105
Change in fair value of earnout liability	(45,497)	—
Changes in operating assets and liabilities:		
Other receivables	(112)	960
Grants receivable	(17)	4
Prepaid expenses and other current assets	(29)	86
Accounts payable	(1,880)	(536)
Accrued expenses	2,899	396
Related party payable	98	—
Net cash used in operating activities	(6,675)	(2,271)
Cash flows from investing activities		
Purchases of property, plant, and equipment, net of grants	(2,703)	(1,267)
Net cash used in investing activities	(2,703)	(1,267)
Cash flows from financing activities		
Proceeds from notes payable, net of debt issuance costs	11,707	906
Payment of short-term debt	(906)	—
Proceeds from Canadian Government Research and Development Program	173	1,055
Issuance of common stock	55	1
Business combination, net of issuance costs paid	467,530	—
Net cash provided by financing activities	478,559	1,962
Effects of foreign exchange rate changes on the balance of cash and cash equivalents, and restricted cash held in foreign currencies	(178)	184
Net increase (decrease) in cash and cash equivalents, and restricted cash	469,003	(1,392)
Cash and cash equivalents, and restricted cash, beginning of the period	1,874	3,612
Cash and cash equivalents, and restricted cash, end of the period	$470,877	$ 2,220
Supplemental disclosure of cash flow information		
Conversion of stockholder convertible notes payable to common stock	$ 20,493	$ —
Reclassification of redeemable convertible preferred stock warrants to common stock	$ 54,267	$ —
Reclassification of contingently issued equity to liability	$209,380	$ —
Net assets assumed from business combination	$ 83,330	$ —
Debt discount related to derivative liability	$ 2,196	$ —
Business combination transaction costs, accrued but not paid	$ 748	$ —

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

ORIGIN MATERIALS, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Business

Unless the context otherwise requires, references in these notes to “Origin”, “the Company”, “we”, “us” and “our” and any related terms are intended to mean the post-Business Combination Origin Materials, Inc. and its consolidated subsidiaries.

The Company’s mission to help enable the world’s transition to sustainable materials by replacing petroleum-based materials with decarbonized materials in a wide range of end products, such as food and beverage packaging, clothing, textiles, plastics, car parts, carpeting, tires, adhesives, soil amendments and more. The Company’s technology converts sustainable feedstocks, such as sustainably harvested wood, agricultural waste, wood waste and corrugated cardboard, into materials and products that are currently made from fossil feedstocks, such as petroleum and natural gas. The Company’s products are intended to compete directly with petroleum-derived products on both performance and price, as well as provide a significant unit cost advantage over products made from other low-carbon feedstocks.

The Company is currently developing and constructing its first manufacturing plant in Ontario, Canada (Origin 1), which is expected to become operational by 2022. The Company is also currently in the planning phase for the construction of a significantly larger manufacturing plant (Origin 2), with which is expected to become operational in 2025.

On June 25, 2021 (the “Closing Date”), Artius Acquisition Inc. (“Artius”), a special purpose acquisition company, consummated the Merger Agreement and other Related Agreements (the “Merger Agreement”) dated February 16, 2021, by and among Artius, Zero Carbon Merger Sub Inc., a Delaware corporation and a wholly owned subsidiary of Artius (“Merger Sub”), and Micromidas, Inc. a Delaware corporation (“Legacy Origin”).

Pursuant to the terms of the Merger Agreement, a business combination between Artius and Legacy Origin was effected through the merger of Merger Sub with and into Legacy Origin, with Legacy Origin surviving as the surviving company and as a wholly-owned subsidiary of Artius (the “Merger” and, collectively with the other transactions described in the Merger Agreement, the “Business Combination”). On the Closing Date, Artius changed its name to Origin Materials Inc. (collectively with its subsidiaries, the “Company”).

For additional information on the Business Combination, please refer to Note 4, *Business Combination*, to these condensed consolidated financial statements.

Beginning in March 2020, the COVID-19 pandemic and the measures imposed to contain this pandemic have disrupted and are expected to continue to impact the Company’s business. The magnitude of the impact of the COVID-19 pandemic on the Company’s productivity, results of operations and financial position, and its disruption to the Company’s business and battery development and timeline, will depend in part, on the length and severity of these restrictions and on the Company’s ability to conduct business in the ordinary course.

2. Risks and Liquidity

Prior to the Business Combination, the Company primarily financed its operations through the sale of convertible preferred stock, borrowings under convertible promissory notes and borrowings under loan agreements. The Company now believes that the Business Combination has provided substantial liquidity and that its $471 million of cash and cash equivalents and restricted cash will enable it to fund its planned operations for at least twelve months from the issuance date of these condensed consolidated financial statements.

3. Summary of Significant Accounting Policies

Basis of Presentation

The Company's unaudited condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") as determined by the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") and pursuant to the regulations of the U.S. Securities and Exchange Commission ("SEC").

Pursuant to the Merger Agreement, the merger between Merger Sub and Legacy Origin was accounted for as a reverse recapitalization in accordance with U.S. GAAP (the "Reverse Recapitalization"). Under this method of accounting, Artius was treated as the "acquired" company and Legacy Origin is treated as the acquirer for financial reporting purposes.

Accordingly, for accounting purposes, the Reverse Recapitalization was treated as the equivalent of Legacy Origin issuing stock for the net assets of Artius, accompanied by a recapitalization. The net assets of Artius are stated at historical cost, with no goodwill or other intangible assets recorded.

Legacy Origin was determined to be the accounting acquirer based on the following predominant factors:

- the Company's Board of Directors (the "Board") and management are primarily composed of individuals associated with Legacy Origin;
- Legacy Origin's senior management comprise the senior management roles of the Company and are responsible for the day-to-day operations;
- the Company assume the "doing business as" name of the Legacy Origin; and
- The intended strategy and operations of the Company continue Legacy Origin's current strategy and operations as a carbon negative materials company with a mission to enable the world's transition to sustainable materials.

The consolidated assets, liabilities and results of operations prior to the Reverse Recapitalization are those of Legacy Origin. The shares and corresponding capital amounts and losses per share, prior to the Business Combination, have been retroactively restated based on shares reflecting the Exchange Ratio (as defined below) established in the Business Combination.

Use of Estimates

The preparation of the condensed consolidated financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of commitments and contingencies at the date of the financial statements as well as reported amounts of expenses during the reporting periods. Estimates made by the Company include, but are not limited to, those related to the valuation of common stock prior to the Business Combination, valuation of convertible preferred stock warrants, and valuation of convertible preferred stock tranche liabilities, carrying amount and useful lives of property and equipment and intangible assets, impairment assessments, stock-based compensation expense, among others. The Company bases these estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Actual results could differ materially from those estimates.

Unaudited Interim Condensed Consolidated Financial Statements

The accompanying interim condensed consolidated balance sheet as of June 30, 2021, the interim condensed consolidated statements of redeemable convertible preferred stock and stockholders' equity, the interim condensed consolidated statements of operations and comprehensive loss, and the interim condensed consolidated statements of cash flows for the six months ended June 30, 2021 and 2020, are unaudited. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in management's opinion, include all adjustments consisting of only normal recurring adjustments necessary for the fair statement of the Company's financial position as of June 30, 2021 and its results of operations and cash flows for the six months ended June 30, 2021 and 2020. The financial data and the other financial information disclosed in the notes to these condensed consolidated financial statements related to the six-month periods are also unaudited. The results of operations for the six months ended June 30, 2021 are not necessarily indicative of the results to be expected for the full fiscal year or any other period.

These unaudited interim condensed consolidated financial statements should be read in conjunction with the Legacy Origin's audited financial statements and notes thereto for the year ended December 31, 2020 included the Company's Form 8-K/A as filed with the SEC on July 1, 2021.

Principles of Consolidation

The unaudited interim consolidated financial statements have been prepared in accordance with U.S. GAAP and applicable rules and regulations of the SEC and include the accounts of the Company and its wholly-owned subsidiaries, Micromidas Pioneer, LLC, Origin Materials Canada Holding Limited, Origin Materials Canada Polyesters Limited, Origin Material Canada Pioneer Limited, and Origin Materials Canada Research Limited. All intercompany accounts and transactions have been eliminated in consolidation.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk are primarily cash and cash equivalents. The Company maintains its cash and cash equivalents accounts with a financial institution where, at times, deposits exceed federal insurance limits. Management believes that the Company is not exposed to significant credit risk as the Company's deposits are held at financial institutions that management believes to be of high credit quality. The Company has not experienced any losses on these deposits.

Cash and Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with an initial maturity of three months or less at the date of purchase to be cash equivalents. The Company maintains such funds in cash deposits and money market accounts.

Restricted cash consists of cash held in a control account as collateral for the Company's credit card services, escrow services, and standby letter of credit. These restricted cash balances have been excluded from cash and cash equivalents balance and are included within other current assets in the condensed consolidated balance sheets based on the respective maturity dates.

In October 2019, the Company entered into an escrow agreement for $1.3 million, whereby the funds would be used for construction and transportation services in connection with Origin 1. At June 30, 2021 and December 31, 2020, the escrow account had a balance of $0.3 million.

In October 2018, the Company entered into a standby letter of credit, whereby the funds may be used for the completion of work, services, and improvements in connection with Origin 1. The standby letter of credit matures and automatically renews in October of each year. At June 30, 2021 and December 31, 2020, the standby letter of credit was $0.2 million.

Cash, cash equivalents, and restricted cash consisted of the following (in thousands):

	June 30, 2021	December 31, 2020
Cash and cash equivalents	$ $470,312	$ 1,309
Restricted cash	565	565
Total cash, cash equivalents, and restricted cash	470,877	1,874

Fair Value of Financial Instruments

The Company applies the fair value measurement accounting standard whenever other accounting pronouncements require or permit fair value measurements. Fair value is defined in the accounting standard as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy under current accounting guidance prioritizes the inputs to valuation techniques used to measure fair value into three broad levels (Level 1, Level 2, and Level 3).

Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability and reflect the Company’s own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk) in a principal market.

The carrying amounts of working capital balances approximate their fair values due to the short maturity of these items. Unless otherwise noted, it is management’s opinion that the Company is not exposed to significant interest rate, currency, or credit risks arising from its financial instruments. The fair value of debt approximates its carrying value based on prevailing market rates.

The fair values of the assumed common stock warrants which are publicly traded are level 1 inputs. The fair value of the assumed common stock warrants which are not publicly traded are level 2 inputs. The earnout liability, derivative liability and redeemable convertible preferred stock warrant liability were estimated using Level 3 inputs.

Other Receivables

Other receivables consist of amounts due from foreign governmental entities related to the Canadian harmonized sales tax (HST) and goods and services tax (GST) for goods and services transacted in Canada.

AgriScience Grant

In January 2019, the Company entered into an agreement in which it will participate in the AgriScience Program Cluster Component grant through the Canadian Agricultural Partnership, whereby the Company will receive reimbursements for eligible expenditures up to approximately $2.7 million Canadian dollars through March 2022. Grants are received through reimbursements from the Canadian government and recognized, upon completion of scope of services on a quarterly basis. Grants are recognized as a reduction of property, plant, and equipment or expense based on the nature of the cost the grant is reimbursing. During the six months ended June 30, 2021 and 2020 the Company received $0.1 million and $0.1 million in grants, recorded in other income, net on the consolidated statements of operations and comprehensive loss.

Property, Plant, and Equipment

Property, plant, and equipment are recorded at cost and depreciated or amortized using the straight-line method over the estimated useful lives of the respective assets. Existing useful lives range from three to five years. Leasehold improvements are amortized using the straight-line method over the shorter of their estimated useful lives or the lease term. Major additions and improvements are capitalized, while replacements, repairs, and maintenance that do not extend the life of an asset are charged to operations. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation or amortization are removed from the accounts. Construction in progress relates to costs capitalized in conjunction with major improvements that have not yet been placed in service, and accordingly are not currently being depreciated. The Company capitalizes interest cost incurred on funds used to construct property, plant and equipment. The estimated useful lives of assets are as follows:

Computer Equipment	3 years
Office Furniture	5 years
Machinery and Equipment	5 years
Leasehold Improvements	1-5 years

Intangible Assets

Intangible assets are recorded at cost and are amortized using the straight-line method over the estimated useful lives of the respective assets, ranging from 7 to 15 years. The cost of servicing the Company’s patents is expensed as incurred. Upon retirement or sale, the cost of intangible assets is disposed of and the related accumulated amortization is removed from the accounts.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets, including property, equipment, software and intangibles, for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be fully recoverable. If indicators of impairment exist, management identifies the asset group which includes the potentially impaired long-lived asset, at the lowest level at which there are separate, identifiable cash flows. If the total of the expected undiscounted future net cash flows for the asset group is less than the carrying amount of the asset, a loss is recognized for the difference between the fair value and carrying amount of the asset. For the six months period ended June 30, 2021 and 2020, no impairment was identified.

Government Loans

Government loans are classified as a noncurrent liability and recorded at amortized cost. Forgiveness of the balances due is recorded through earnings and occurs when there is confirmation from the governmental authority that the Company has complied with the conditions for forgiveness attached to the loan.

Debt Issuance Costs

The costs incurred in connection with the issuance of debt obligations, principally financing and legal costs, are capitalized. These costs are accreted over the term of the debt using the interest method. During the six months ended June 30, 2021 and 2020, accretion expense for debt issuance cost was $2.4 million and $0 million, respectively.

Redeemable Convertible Preferred Stock Warrants Liability

Free-standing warrants issued by Legacy Origin for the purchase of shares of its convertible preferred stock were classified as liabilities on the accompanying balance sheets at fair value using an Option-Pricing Model ("OPM"). Prior to the Business Combination, the liability recorded was adjusted for changes in the fair value at each reporting date and recorded as interest expense in the accompanying unaudited Condensed Consolidated Statements of Operations and Comprehensive Loss. As a result of the Business Combination, the Legacy Origin warrants each converted into a warrant to purchase shares of the Company's Common Stock converted at the Exchange Ratio. The fair value of the warrants upon consummation of the Business Combination (see Note 4), as adjusted based on the price of the underlying Common Stock, was reclassified to additional paid-in capital.

Assumed Common Stock Warrants Liability

The Company assumed 24,150,000 public warrants (the "Public Warrants") and 11,326,667 private placement warrants (the "Private Placement Warrants", and the Public Warrants together with the Private Placement Warrants, the "Assumed Common Stock Warrants") upon the Business Combination, all of which were issued in connection with Artius' initial public offering and entitle each holder to purchase one share of Class A Common Stock at an exercise price of at $11.50 per share. As of June 30, 2021, 24,150,000 Public Warrants and 11,326,667 Private Placement Warrants are outstanding. The Public Warrants are publicly traded and are exercisable for cash unless certain conditions occur, such as the failure to have an effective registration statement related to the shares issuable upon exercise or redemption by the Company under certain conditions, at which time the warrants may be cashless exercised. The Private Placement Warrants are transferable, assignable or salable in certain limited exceptions. The Private Placement Warrants are exercisable for cash or on a cashless basis, at the holder's option, and are non-redeemable so long as they are held by the initial purchasers or their permitted transferees. If the Private Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Placement Warrants will cease to be Private Placement Warrants, and become Public Warrants and be redeemable by the Company and exercisable by such holders on the same basis as the other Public Warrants.

The Company evaluated the Assumed Common Stock Warrants under ASC 815-40, *Derivatives and Hedging-Contracts in Entity's Own Equity ("ASC 815-40")*, and concluded they do not meet the criteria to be classified in stockholders' equity. Specifically, the exercise of the Assumed Common Stock Warrants may be settled in cash upon the occurrence of a tender offer or exchange that involves 50% or more of our Class A stockholders. Because not all of the voting stockholders need to participate in such tender offer or exchange to trigger the potential cash settlement and the Company does not control the occurrence of such an event, the Company concluded that the Assumed Common Stock Warrants do not meet the conditions to be classified in equity. Since the Assumed Common Stock Warrants meet the definition of a derivative under ASC 815, the Company recorded these warrants as liabilities on the Condensed Consolidated Balance Sheets at fair value, with subsequent changes in their respective fair values recognized in the change in fair value of Assumed Common Stock Warrant liabilities within the Consolidated Statement of Operations and Comprehensive Loss at each reporting date. The Public Warrants were publicly traded and thus had an observable market price to estimate fair value, and the Private Placement Warrants were effectively valued similar to the Public Warrants, as described in Note 5.

Earnout Liability

The Company has recorded an earnout liability related to future contingent equity shares related to the Business Combination (Note 13). The Company recorded these instruments as liabilities on the condensed consolidated balance sheet at fair value, with subsequent changes in their respective fair values recognized in earnings at each reporting date.

Research and Development Cost

Costs related to research and development are expensed as incurred.

Stock-Based Compensation

The Company has issued common stock options under two equity incentive plans. The Company estimates the calculated value of stock options granted using the Black-Scholes option-pricing formula. This fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

Assumptions used to value the equity instruments are as follows:

- *Expected term* – The expected term of the options is based on the simplified method, which takes into consideration the grant's contractual life and vesting period and assumes that all options will be exercised between the vesting date and the contractual term of the option which averages an award's vesting term and its contractual term.
- *Expected volatility* – The Company uses the trading history of various companies in its industry sector in determining an estimated volatility factor.
- *Expected dividend* – The Company has not declared common stock dividends and does not anticipate declaring any common stock dividends in the foreseeable future.
- *Forfeiture* – The Company estimates forfeitures based on historical activity and considers voluntary and involuntary termination behavior as well as analysis of actual historical option forfeitures, netting the estimated expense by the derived forfeiture rate.
- *Risk-free interest rate* – The Company bases the risk-free interest rate on the implied yield currently available on U.S. Treasury zero-coupon issues with the same or substantially equivalent remaining term.

Income Taxes

Deferred income taxes are determined using the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is recorded when the expected recognition of a deferred income tax asset is considered to be unlikely.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefit is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The Company recognizes interest and penalties related to income tax matters as a component of income tax expense.

Functional Currency Translation

The functional currency of the Company's wholly-owned subsidiaries is the Canadian dollar, whereby their assets and liabilities are translated at period-end exchange rates except for nonmonetary capital transactions and balances, which are translated at historical rates. All income and expense amounts of the Company are translated at average exchange rates for the respective period. Translation gains and losses are not included in determining net loss but are accumulated in a separate component of stockholders' equity. Foreign currency transaction gains and losses are included in the determination of net loss in the period in which they occur. These amounts are included in other income, net, of the unaudited consolidated statements of operations and comprehensive loss.

Comprehensive Loss

The Company's comprehensive income or loss consists of net income or loss and other comprehensive loss. Foreign currency translation gains and losses are included in the Company's other comprehensive income or loss.

Basic and Diluted Net Loss Per Share

Basic net loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period, without consideration of potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common stock and potentially dilutive securities outstanding for the period. For the purposes of the diluted net loss per share calculation, the convertible preferred stock, common stock options, convertible preferred stock warrants, common stock warrants, convertible notes, earnout shares, and sponsor vesting shares are considered to be potentially dilutive securities. Basic and diluted net loss per share attributable to common stockholders is presented in conformity with the two-class method required for participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. All series of the Company's convertible preferred stock are considered to be participating securities because, in addition to cumulative dividends, all holders are entitled to receive a non-cumulative dividend on a pari passu basis in the event that a dividend is paid on the common stock. The two-class method requires loss available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to share in undistributed earnings as if all loss for the period had been distributed. The holders of the convertible preferred stock do not have a contractual obligation to share in the Company's losses. Accordingly, the Company's net loss is attributed entirely to common stockholders. Since the Company has reported a net loss for all periods presented, diluted net loss per common share is the same as basic net loss per common share for those periods.

Reclassifications

Certain amounts in prior periods have been reclassified to conform with the report classifications of the three months and six months ended June 30, 2021, noting the Company has reflected the reverse recapitalization pursuant to the Business Combination for all periods presented within the unaudited condensed consolidated balance sheets and condensed consolidated statements of redeemable convertible preferred stock and stockholders' equity.

Segment Reporting

The Company operates in a single segment. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker ("CODM") in making decisions regarding resource allocation and assessing performance. The Company has determined that its Co-Chief Executive Officers are the CODM. To date, the Company's CODM has made such decisions and assessed performance at the Company level.

As of June 30, 2021 and December 31, 2020, the Company had $48.8 million and $45.4 million, respectively, of assets located outside of the United States.

Emerging Growth Company Status

Following the closing of the Business Combination, the Company is an "emerging growth company" ("EGC"), as defined in the Jumpstart Our Business Startups Act ("JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act, which provides that an EGC can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to avail itself of the extended transition period and, therefore, while the Company is an EGC it will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not EGCs, unless it chooses to early adopt a new or revised accounting standard. As a result of this election, the condensed consolidated financial statements may not be comparable to companies that comply with public company FASB standards' effective dates. We will no longer qualify as an emerging growth company for Securities Act or Exchange Act reporting after December 31, 2021.

4. Business Combination

On June 25, 2021, Legacy Origin and Artius completed the Business Combination pursuant to the Merger Agreement with Legacy Origin (Micromidas, Inc.) surviving the merger as a wholly owned subsidiary of Artius, which became Origin Materials, Inc. Cash proceeds from the Business Combination totaled approximately $385.4 million, which included funds held in Artius's trust account and the completion of the concurrent PIPE and Backstop Financing.

In accordance with the terms and subject to the conditions of the Merger Agreement, at the effective time of the Merger, (i) all shares of Legacy Origin's Series A, Series B, and Series C Preferred Stock, and Common Stock (collectively, "Legacy Origin Stock") issued and outstanding immediately prior to the effective time of the Merger were converted into the right to receive their pro rata portion of shares of Company Common Stock (the "Common Stock") issued as Merger consideration (the "Merger Consideration"); (ii) holders of Legacy Origin's Convertible Notes Payable, plus accrued interest also received shares of Company common stock; (iii) each option exercisable for Legacy Origin Stock that was outstanding immediately prior to effective time of the Merger was assumed and continues in full force and effect on the same terms and conditions as were previously applicable to such options, subject to adjustments to exercise price and number of shares Common Stock issuable upon exercise based on the final conversion ratio calculated in accordance with the Merger Agreement. Additionally, as part of the consideration transferred, stockholders of Legacy Origin and Artius were given the right to additional shares in the Company. These shares vest to the holder upon the share price of the Company reaching certain targets over a future period ("Earnout Shares", see Note 13).

The Company accounted for the Business Combination as a reverse recapitalization, which is the equivalent of Legacy Origin issuing stock for the net assets of Artius, accompanied by a recapitalization, with Artius treated as the acquired company for accounting purposes. The determination of Artius as the "acquired" company for accounting purposes was primarily based on the fact that subsequent to the Business Combination, Legacy Origin will comprise all of the ongoing operations of the combined entity, a majority of the governing body of the combined company and Legacy Origin's senior management will comprise all of the senior management of the combined company. The net assets of Artius were stated at historical cost with no goodwill or other intangible assets recorded. Reported results from operations included herein prior to the Business Combination are those of Legacy Origin. The shares and corresponding capital amounts and loss per share related to Legacy Origin's outstanding convertible preferred stock and common stock prior to the Business Combination have been retroactively restated to reflect the conversion ratio established in the Merger Agreement (1.00 Legacy Origin share for approximately 2.11 shares of New Origin, the "Conversion Ratio").

In connection with the Business Combination, the Company incurred underwriting fees and other costs considered direct and incremental to the transaction totaling $36.7 million, consisting of legal, accounting, financial advisory and other professional fees. These amounts are reflected within additional paid-in capital in the condensed consolidated balance sheet as of June 30, 2021.

PIPE Financing

Concurrent with the execution of the Business Combination, the Company entered into subscription agreements with certain investors (the “PIPE Investors”) pursuant to which the PIPE Investors subscribed for and purchased an aggregate of 20,000,000 shares of Common Stock for an aggregate purchase price of $200 million.

Backstop Agreement

Concurrent with the execution of the Business Combination, the Company entered into various subscription agreements (the “Subscription Agreements”) with certain current shareholders of the Company or their affiliates (collectively, the “Subscribers”), pursuant to which the Subscribers agreed, subject to certain conditions in the Subscription Agreements, to purchase an aggregate amount of 4,300,001 shares of common stock of the Company, par value $0.0001 per share (the “Subscription Shares”), at $10.00 per share.

Summary of Net Proceeds

The following table summarizes the elements of the net proceeds from the Business Combination as of June 30, 2021 (in thousands):

Cash—Trust Account (net of redemptions of $439 million)	$260,448
Cash	60
Cash—PIPE & Backstop Financing	243,000
Non-cash net assets assumed from Artius	40
Less: Fair value of assumed common stock warrants	(83,370)
Less: Underwriting fees and other issuance costs paid prior to June 30, 2021	(34,773)
Additional Paid-in-Capital from Business Combination, net of issuance costs paid	$385,405
Less: Non-cash net assets assumed from Artius	(40)
Add: Non-cash fair value of assumed common stock warrants	83,370
Add: Other issuance costs included in accounts payable and accrued liabilities	761
Less: Accrued liabilities extinguished through proceeds from Business Combination	(1,966)
Cash proceeds from the Business Combination	$467,530

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Summary of Shares Issued

The following table summarizes the number of shares of Common Stock outstanding immediately following the consummation of the Business Combination:

Artius shares outstanding prior to the Business Combination, excluding 4,500,000 Sponsor Vesting Shares	86,062,500
Less: redemption of Artius shares	43,880,956
Shares issued pursuant to the PIPE and Backstop Financing	24,300,001
Business Combination and PIPE Financing shares, excluding 4,500,000 Sponsor Vesting Shares	66,481,545
Conversion of Legacy Origin Series A preferred stock for common stock	33,783,099
Conversion of Legacy Origin Series B preferred stock for common stock	19,755,784
Conversion of Legacy Origin Series C preferred stock for common stock	6,286,349
Conversion of Legacy Origin convertible notes for common stock	2,049,212
Conversion of Legacy Origin common stock for common stock	2,838,041
Issuance of common stock upon exercise of warrants	5,554,440
Total shares of New Origin common stock outstanding immediately following the Business Combination	136,748,470

The 4,500,000 of Sponsor Vesting Shares (Note 13) are not issued shares and are not included in the table, above.

5. Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740), to simplify the accounting for income taxes. The new guidance changes various subtopics of accounting for income taxes including, but not limited to, accounting for “hybrid” tax regimes, tax basis step-up in goodwill obtained in a transaction that is not a business combination, intraperiod tax allocation exception to incremental approach, ownership changes in investments, interim-period accounting for enacted changes in tax law, and year-to-date loss limitation in interim-period tax accounting. The Company early adopted the new standard as of January 1, 2021. The adoption of the standard had no material impact on the Company’s financial results.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, as amended, with guidance regarding the accounting for and disclosure of leases. This update requires lessees to recognize the liabilities related to all leases, including operating leases, with a term greater than 12 months on the balance sheets. This update also requires lessees and lessors to disclose key information about their leasing transactions. This guidance will become effective for the Company for the current annual reporting period ending December 31, 2021 and interim periods thereafter. The Company is currently evaluating the impact of this standard on its unaudited consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments*, which requires a financial asset (or a group of financial assets) measured on the basis of amortized cost to be presented at the net amount expected to be collected. This ASU requires that the income statement reflect the measurement of credit losses for newly recognized financial assets as well as the increases or decreases of expected credit losses that have taken place during the period. This ASU requires that credit losses of debt securities designated as available-for-sale be recorded through an allowance for credit losses and limits the credit loss to the amount by which fair value is below amortized cost. This guidance will become effective for the Company for the current annual reporting period ending December 31, 2021 and interim periods thereafter. The Company is currently evaluating the impact of this standard on its unaudited consolidated financial statements.

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In August 2020, the FASB issued ASU 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity. The guidance is effective for fiscal years beginning on or after December 15, 2021, with early adoption permitted, but no earlier than fiscal years beginning after December 15, 2020. The Company is currently evaluating the impact of the guidance on its unaudited consolidated financial statements.

In March 2020, the Financial Accounting Standards Board issued ASU No. 2020-04, *Reference Rate Reform*, which provides temporary optional guidance to companies impacted by the transition away from the London Interbank Offered Rate ("LIBOR"). The guidance provides certain expedients and exceptions to applying U.S. GAAP in order to lessen the potential accounting burden when contracts, hedging relationships, and other transactions that reference LIBOR as a benchmark rate are modified. The provisions of the new standard may be adopted as of the beginning of the reporting period when the election is made until December 31, 2022. The Company is evaluating the impact this ASU will have on its financial position, results of operations, cash flows, and disclosures. The Company has not elected an adoption date.

6. Fair Value Measurement

The Company's financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used for such measurements were as follows (amounts in thousands):

	Fair Value as of June 30, 2021			
(in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds in cash and cash equivalents	$ 2,513	$ —	$ —	$ 2,513
Total fair value	$ 2,513	$	$	$ 2,513
Liabilities:				
Assumed common stock warrants (Public)	$47,093	$ —	$ —	$ 47,093
Assumed common stock warrants (Private Placement)	—	22,087	—	22,087
Earnout liability	—	—	157,585	157,585
Total fair value	$47,093	$22,087	$157,585	$226,765

(in thousands)	Fair Value as of December 31, 2020 Level 1	Level 2	Level 3	Total
Assets:				
Money market funds in cash and cash equivalents	$ 936	$ —	$ —	$ 936
Total fair value	$ 936	$ —	$ —	$ 936
Liabilities:				
Redeemable convertible preferred stock warrants liability	$ —	$ —	$ 19,233	$19,233
Derivative liability	—	—	1,239	1,239
	$ —	$ —	$ 20,472	$20,472

The Company performs routine procedures such as comparing prices obtained from independent sources to ensure that appropriate fair values are recorded. Because the transfer of Private Placement Warrants to anyone outside of certain permitted transferees of Artius Acquisition Partners LLC (the "Sponsor") would result in the Private Placement Warrants having substantially the same terms as the Public Warrants, the Company determined that the fair value of each Private Placement Warrant is consistent with that of a Public Warrant. Accordingly, the Private Placement Warrants are classified as Level 2 financial instruments.

The value of the redeemable convertible preferred stock warrants liability and the derivative liability are classified as Level 3 measurements under the fair value hierarchy, as these liabilities have been valued based on significant inputs not observable in the market.

As of June 30, 2021 and December 31, 2020, the carrying values of cash and cash equivalents, accounts payable and accrued liabilities approximate their respective fair values due to their short-term nature.

Redeemable Convertible Preferred Stock Warrant Liability

In connection with the issuance of Series A preferred stock during 2012, the Company issued preferred stock warrants to purchase 1,000,000 shares of Series A preferred stock at an exercise price of $2.7233 per share. These warrants were initially exercisable any time within 10 years of issuance. In November 2019, as part of the Bridge Notes issuance (see Note 11), these Series A preferred stock warrants had their contractual exercise period extended 10 years to October 2032.

In connection with the issuance of Series A preferred stock during 2015, the Company issued preferred stock warrants to purchase 1,134,653 shares of Series A preferred stock at an exercise price of $2.7233 per share. These warrants were initially exercisable any time within 10 years of issuance. In November 2019, as part of the Bridge Notes issuance (see Note 11), these Series A preferred stock warrants had their contractual exercise period extended 10 years to October 2035.

In connection with the issuance of Series A preferred stock during April 2016, the Company issued a preferred stock warrant to purchase 122,400 shares of Series A preferred stock at an exercise price of $2.7233 per share. This warrant is exercisable and expires in April 2036.

In connection with the issuance of convertible promissory notes in 2016, the Company in 2016 and 2017 issued preferred stock warrants to purchase 331,927 and 35,412 shares, respectively, of Series B preferred stock at an exercise price of $7.486 per share. These preferred stock warrants are exercisable and expire from June through July 2026 and June 2036 through January 2037.

At December 31, 2020, the fair value of the preferred stock warrants was determined using the probability-weighted expected return method which estimates the fair value of the warrants through an analysis of future values for the Company, assuming various future outcomes. A Black-Scholes option pricing model (BSM) is utilized in this method, to the extent necessary, based on current conditions. At December 31, 2020, due to the increasing likelihood of the merger, the BSM was not necessary to execute the model. A summary of key assumptions in the BSM for determining the fair value of redeemable convertible preferred stock warrants include:

	December 31, 2020
Expected life (years)	3.00
Risk-free interest rate	0.17%
Expected volatility	70.00%
Dividend yield	0%

The preferred stock warrants were reclassified to equity through the closing of the business combination (see Note 4).

Derivative Liability

The Company evaluated the stockholder convertible notes payable in accordance with ASC 815 Derivatives and Hedging and determined that the embedded components of these contracts qualify as a derivative to be separately accounted for as a liability. The Company records the fair value of the embedded components in accordance with ASC 815, Derivatives and Hedging. The fair value of the derivatives was calculated using a model that estimated the value that would be paid to transfer the liability in an orderly transaction between market participants at the measurement date. The fair value of the derivative liabilities is revalued on each balance sheet date with a corresponding gain or loss recorded in the consolidated statement of operations.

The following table sets forth a summary of the activities of the Company's redeemable convertible preferred stock warrant liability and derivative liability, which represents a recurring measurement that is classified within Level 3 of the fair value hierarchy wherein fair value is estimated using significant unobservable inputs:

	Three Months Ended June 30,	
(in thousands)	2021	2020
Beginning warrant liability balance	$ 67,342	$ 735
Change in fair value	(12,201)	105
Reclassification to APIC upon recapitalization	(55,141)	—
Ending warrant liability balance	$ —	$ 840

	Three Months Ended March 31,	
(in thousands)	2021	2020
Beginning derivative liability balance	$ 3,826	$ 147
Change in fair value	(3,826)	(12)
Ending derivative liability balance	$ —	$ 135

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7. Property, Plant and Equipment

Property, plant, and equipment consisted of the following:

	June 30, 2021	December 31, 2020
Land	$ 41	$ 39
Pilot plant	5,305	5,237
Lab equipment	2,142	1,958
Machinery and equipment	655	655
Computer and other equipment	319	295
Construction in process	47,664	43,962
	56,126	52,146
Less accumulated depreciation and amortization	(7,272)	(7,042)
Total property, plant, and equipment, net	$ 48,854	$ 45,104

For the three months ended June 30, 2021 and 2020, depreciation expense totaled $0.1 million.

At June 30, 2021 and December 31, 2020, the Company capitalized $0.8 million and $0.7 million, respectively, of interest cost into Origin 1. At June 30, 2021 and December 31, 2020 a cumulative translation adjustment of $0.7 million and $0.9 million, respectively, is included in total property, plant, and equipment as a result of foreign currency transaction gains and losses.

8. Intangible Assets

Intangible assets consisted of the following:

	June 30, 2021	December 31, 2020
Patents	$ 442	$ 430
Less accumulated amortization	(200)	(172)
	$ 242	$ 258

The weighted average useful life of the intangible assets was 9.87 years. For the three months ended June 30, 2021 and 2020, amortization expense was $14,189 and $5,222, respectively.

9. Consortium Agreement

In December 2016, the Company entered into a consortium agreement with two Legacy Origin Series B preferred stock investors to collaborate on development of a process to commercialize bio-based, decarbonizing materials for application on an industrial scale at a competitive price. Under the consortium agreement, the Company received $500,000. The agreement expires once performance of the research and development program has been completed.

In August 2018, the agreement was amended, whereby a Legacy Origin Series C preferred stock investor (the “Legacy Origin Series C Investor”, and collectively with the two Legacy Origin Series B investors, the “Legacy Origin Investors”) was added to the agreement and committed to invest $1,500,000 of research and development in the consortium. As of June 30, 2021, the Legacy Origin Series C Investor had not invested any funds in the consortium.

In 2020 an additional counterparty, that is an unrelated party, was added to the consortium agreement. During three months ended June 30, 2021 and 2020, the Company received $0 and $0.1 million, respectively, under the consortium agreement which was recorded as other income, net in the consolidated statement of operations and comprehensive loss.

10. Offtake Arrangements

The Company maintains four separate offtake supply agreements (the "Offtake Agreements"). All are with stockholders or affiliates of stockholders. Pursuant to the Offtake Agreements, the Company will construct manufacturing plants with specific capacity and product quality requirements within certain timeframes for the manufacture of product for sale to the counterparties to the agreements, and the counterparties will make minimum annual purchases at a set price, subject to adjustments, all as defined in the agreements.

The Offtake Agreements allow the customers to terminate the agreements if specified construction and product delivery requirements are not satisfied. For example, under two of these agreements, if Origin 1 has not commenced commercial operation by December 31, 2021 or Origin has not delivered specified product volume from Origin 1 by September 30, 2022, then the customer may terminate the agreement and any outstanding secured promissory notes resulting from advance payments made to Origin will become due immediately (see Note 11). These outstanding obligations, together with accrued interest, totaled an aggregate of $10.8 million and $10.7 million as of June 30, 2021 and December 31, 2020 respectively (see Notes 11 and 12). These agreements also require the Company to pay liquidated damages up to an aggregate of $0.9 million if Origin 1 has not commenced commercial operation by December 31, 2020 or the Company has not delivered specified product volume from Origin 1 by September 30, 2021. In September 2020, the counterparties to these agreements agreed to waive compliance with the milestones and their right to liquidated damages until June 30, 2021, in order to facilitate the negotiation of amendments to the agreements, including the milestone achievement dates. In June 2021, one of the counterparties agreed to further extend this deadline through September 30, 2021. A third offtake agreement is terminable by the customer if commercial operation or delivery of product from Origin 1 has not occurred by December 31, 2022.

The Company believes enforcement of the liquidated damages provisions was not probable and expects to secure amendments to these offtake agreements pursuant to its ongoing discussions with these customers. However, the Company cannot guarantee that it will be successful in amending these offtake agreements.

One of the Offtake Agreements provides the counterparty the option, exercisable within one year of the first delivery of product from Origin 1, to enter into a contract to purchase a range of quantities of product from Origin 2 for a maximum term of 10 years. If the option is exercised and the Company directly or indirectly constructs Origin 2, the Company must either enter into an agreement with the counterparty within 90 days or pay a fee. The are no impacts to these unaudited condensed consolidated financial statements from this stipulation.

11. Debt

PPP Loan

In April 2020, the Company executed a promissory note (the "PPP Note") evidencing an unsecured loan in the amount of $0.9 million under the Paycheck Protection Program (the "PPP Loan"). The Paycheck Protection Program (or "PPP") was established under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and is administered by the U.S. Small Business Administration ("SBA"). The Loan has been made through First Republic Bank (the "Lender").

The PPP Loan has a two-year term and bears interest at a rate of 1.00% per annum, accruing upon funding. Unless the PPP Loan is forgiven, the Company will be required to make monthly payments of principal and interest to the Lender. The Company does not intend to seek forgiveness of the PPP loan.

The PPP Note contains customary events of default relating to, among other things, payment defaults, providing materially false and misleading representations to the SBA or Lender, or breaching the terms of the PPP Loan documents. The occurrence of an event of default may result in the immediate repayment of all amounts outstanding, collection of all amounts owing from the Company, or filing suit and obtaining judgment.

Under the terms of the CARES Act, PPP Loan recipients can apply for and be granted forgiveness for all or a portion of the loan granted under the PPP. Such forgiveness will be determined, subject to limitations, based on the use of loan proceeds for payment of payroll costs and any payments of mortgage interest, rent, and utilities. However, no assurance is provided that forgiveness for any portion of the PPP Loan will be obtained.

The PPP Loan was paid in full during the 3 months ended June 30, 2021.

Stockholder Convertible Notes Payable

In November 2019, the Company entered into secured convertible note agreements (“Bridge Notes”) with certain Legacy Origin preferred stockholders, whereby the Company can borrow up to $6 million. The Bridge Notes bear an annual interest rate of 10% and mature on March 31, 2021, unless converted. If the Company issues shares of a new series of preferred stock prior to maturity, the outstanding principal and unpaid accrued interest will convert at 70% of the per share price of the new series of preferred stock. Upon a liquidation event, as defined in the agreements, the Company will repay purchasers in cash an amount equal to 200% of the outstanding principal amount plus the outstanding principal and accrued interest. The Bridge Notes are collateralized by substantially all of the Company’s assets. At December 31, 2020, there was $3.3 million, outstanding on the Bridge Notes. The conversion and liquidation features were deemed to be derivatives under ASC 815 (see Note 6) and separately measured and recognized from the Bridge Notes through a debt discount.

In January of 2021, the Company amended the Bridge Notes to extend the maturity date from March 31, 2021 to September 30, 2021. The amendment also added a SPAC transaction to the conversion provision such that the Bridge Notes convert if the Company issues at least $50 million of shares of a new series of preferred stock or closes a SPAC transaction (each a “Qualified Financing”) prior to maturity. In a Qualified Financing that is a preferred stock issuance, the notes convert at 70% of the cash price paid per share for the preferred shares. In a Qualified Financing that is a SPAC transaction, the notes convert at the lesser of (i) 70% of the per share value attributed to the shares of the Company’s common stock as set forth in the Merger Agreement or (ii) the per share value that would be attributed to the Company’s common stock assuming a pre-transaction valuation of the Company in connection with the SPAC transaction of $700 million. These notes fully converted into New Origin common stock upon consummation of the business combination (see Note 4).

In February of 2021 the Company issued $10 million of new, unsecured convertible notes (the “Convertible Notes”). The Convertible Notes bear an annual interest rate of 8% and mature on September 30, 2021, unless converted. If the Company issues at least $50 million worth of shares of a new series of preferred stock prior to maturity or closes a SPAC transaction (each a “Qualified Financing”), the outstanding principal and unpaid accrued interest will convert at 80% of the per share price of the new series of preferred stock or, in the case of a SPAC transaction, at 80% of the per share value attributed to the shares of the Company’s common stock as set forth in the Merger Agreement. Upon a Change of Control (other than a Qualified Financing), as defined in the Convertible Notes, the Company will repay purchasers in cash an amount equal to the outstanding principal and accrued interest plus a repayment premium equal to 100% of the outstanding principal amount of the notes. Debt issuance costs are recorded against the outstanding payable balance. These notes fully converted into New Origin common stock upon consummation of the business combination (see Note 4).

Stockholder Note

In November 2016, the Company received a $5 million prepayment from a stockholder for product from Origin 1 pursuant to an Offtake Agreement (see Note 10). The prepayment was to be credited against the purchase of products over the term of the Offtake Agreement. The prepayment was secured by a promissory note (the "Promissory Note") to be repaid in cash in the event that the prepayment could not be credited against the purchase of product, for example, if Origin 1 was never constructed. The Promissory Note was collateralized substantially by Origin 1 and other assets of Origin Material Canada Pioneer Limited. In May 2019, the Company and stockholder amended the Offtake Agreement and Promissory Note. The amendment added accrued interest of $0.2 million to the principal balance of the prepayment and provided for the prepayment amount to be repaid in three annual installments rather than being applied against the purchase of product from Origin 1. The Promissory Note would bear interest at 3.50% per annum and be repaid in three installments of $2.2 million, $2.1 million, and $2.1 million (inclusive of accrued but unpaid interest) on December 20, 2024, December 19, 2025, and December 18, 2026, respectively, unless the Bridge Notes have not been converted or repaid by December 30, 2021, in which case the Promissory Note maturity date would be December 31, 2021. At June 30, 2021 and December 31, 2020, the total debt outstanding was $5.2 million.

12. Other liabilities, long-term and related party other liabilities, long-term

Other Liabilities, Long-term

In September 2019, the Company entered into a $5.0 million prepayment agreement for the purchase of products from Origin 2. The prepayment is to be made in two equal installments: the first $2.5 million was in October 2019 and the remaining $2.5 million is due within 30 days of the customer confirming that a sample from Origin 1 meets the customer's specifications. The Company and customer agreed to work in good faith to execute an Offtake Agreement, the agreed terms of which are set forth in the prepayment agreement, whereby 100% of the prepayment will be applied against future purchases. The prepayment agreement provides the customer a capacity reservation of up to a specified annual volume of product from Origin 1 for a term of ten years, pursuant to the terms of an Offtake Agreement. At June 30, 2021 and December 31, 2020, the total amount outstanding on this agreement was $2.5 million.

Related Party Other Liabilities, Long-term

In November 2016, the Company received a $5 million prepayment from a stockholder for product from Origin 1 pursuant to an Offtake Agreement (see Note 10). The prepayment is to be credited against the purchase of products from Origin 1 over the term of the Offtake Agreement. Specifically, repayment is effected by applying a credit to product purchases each month over the first five years of operation of Origin 1 up to $7.5 million, which is equal to 150% of the prepayment amount. If product purchases are not sufficient to recover the advances, the application of the credit to purchases as payment of the advances will continue until fully repaid. The prepayment is secured by a note to be repaid in cash in the event the prepayment cannot be credited against the purchase of product, for example, if Origin 1 is never constructed. The note is collateralized substantially by Origin 1 and other assets of Origin Material Canada Pioneer Limited. If repaid in cash, the note bears an annual interest rate of the three-month London Interbank Offered Rate (LIBOR) plus 0.25% (0.38% at June 30, 2021) and matures five years from the commercial operation date of Origin 1. At June 30, 2021 and December 31, 2020 the total note principal outstanding was $5.1 million and accrued interest outstanding was $0.1 million.

13. Earnout liability

As additional consideration for the Merger, within ten (10) Business Days after the occurrence of a Triggering Event, Artius shall issue or cause to be issued to each Pre-Closing Origin Holder the number of shares of Artius Class A Common Stock equal to the product of (i) the number of shares of Company Common Stock, Company Series A Preferred Stock, Company Series B Preferred Stock, Company Series C Preferred Stock, and the net number of shares of Company Capital Stock that would be issuable in respect of Vested Company Options in the event such options were exercised (on a net exercise basis with respect to only the applicable exercise price, immediately prior to the Closing and settled in the applicable number of shares of Company Common Stock, rounded down to the nearest whole share) held by such Pre-Closing Origin Holder as of immediately prior to the Effective Time; and (ii) the Earnout Exchange Ratio (such issued shares of Artius Class A Common Stock, collectively, the “Earnout Shares”). Notwithstanding anything to the contrary herein, in no event shall Artius be required to issue more than 25,000,000 Earnout Shares in the aggregate. A Triggering Event is defined as the following:

(a) a $15.00 Stock Price Level is reached during the three (3) year period following the Closing Date;

(b) a $20.00 Stock Price Level is reached during the four (4) year period following the Closing Date; or

(c) a $25.00 Stock Price Level is reached during the five (5) year period following the Closing Date.

A Sponsor Letter Agreement was delivered in connection with the Merger such that 4,500,000 million of the shares held by Sponsor (“Sponsor Vesting Shares”) shall be subject forfeiture based on the same vesting requirements as the Earnout Shares. These shares shall not be transferred prior to the date in which they vest. Dividends and other distributions with respect to Sponsor Vesting Shares shall be set aside by Artius and shall be paid to the Sponsor upon the vesting of such Sponsor Vesting Shares.

The Company evaluated the Earnout Liability under ASC 815-40, *Derivatives and Hedging-Contracts in Entity’s Own Equity (“ASC 815-40”)*, and concluded they do not meet the criteria to be classified in stockholders’ equity. Specifically, there are contingent exercise provisions and settlement provisions that exist. Holders may receive differing amounts of shares depending on the company’s stock price or the price paid in a change of control. It is noted that all remaining shares would be issuable (or the forfeiture provisions would lapse) upon any change of control involving the company and all remaining shares would be issuable (or the forfeiture provisions would lapse) upon a bankruptcy or insolvency of the company. This means that settlement is not solely impacted by the share price of the Company (that is, the share price observed in or implied by a qualifying change-in-control event), but also by the occurrence of a qualifying change-in-control event. This causes the arrangement to not be indexed to the Company’s own shares and liability classification is appropriate. The Company recorded these instruments as liabilities on the condensed consolidated balance sheet at fair value, with subsequent changes in their respective fair values recognized in earnings at each reporting date. The earnout liability was fair valued using a monte carlo open-ended model. The inputs used for the model were a dividend yield of 0%, volatility of 63%, and interest rate of 0.87%. At June 30, 2021 and December 31, 2020 the balance of the earnout liability was $158 million and $0, respectively. A gain of $45.5 million was recorded in the three months and six months ended condensed consolidated statement of operations and comprehensive loss for the change in the fair market value of the liability.

14. Canadian Government Research and Development Program Liability

In April 2019, the Company entered into a contribution agreement related to the research and development and construction associated with the operation of Origin 1 in which the Company will participate in a Canadian government research and development program (the “R&D Agreement”). Pursuant to the R&D Agreement, the Company will receive funding for eligible expenditures through March 31, 2023 up to the lesser of approximately 22.14% of eligible costs and $23 million (in Canadian dollars).

The funding will be repaid over 15 years after completion of Origin 1, commencing no sooner than the third fiscal year of consecutive revenues from a commercial plant, but no later than the fifth year following the earlier of (i) the year in which the Company completes construction of Origin 1 or (ii) March 2023. Repayment of the funding will be reduced by 50% if the Company begins construction before December 31, 2024 of one or more commercial plants that operate in Canada, with costs exceeding $500 million (in Canadian dollars), and the plants being constructed and operational within 30 months of the final investment decision, as defined in the R&D Agreement. Once begun, repayments will be paid annually by April of each year through March 31, 2037. Payments will be determined by a formula of the funded amount based on the fiscal year gross business revenue, as defined in the R&D Agreement. At June 30, 2021 and December 31, 2020, the Company recorded a liability for the amount received of $6.4 million and $6.2 million, respectively.

15. Assumed Common Stock Warrants

As of June 30, 2021 there are 35,476,667 warrants outstanding.

As part of Artius's initial public offering, 24,150,000 Public Warrants were sold. The Public Warrants entitle the holder thereof to purchase one share of Common Stock at a price of $11.50 per share, subject to adjustments. The Public Warrants may be exercised only for a whole number of shares of Common Stock. No fractional shares will be issued upon exercise of the warrants. The Public Warrants will expire on June 25, 2026 at 5:00p.m., New York City time, or earlier upon redemption or liquidation. The Public Warrants are listed on the Nasdaq under the symbol "ORGNW".

The Company may redeem the Public Warrants when exercisable, in whole and not in part, at a price of $0.01 per warrant, so long as the Company provides not less than 30 days' prior written notice of redemption to each warrant holder, and if, and only if, the reported last sale price of the Common Stock equals or exceeds $18.00 per share for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date the Company sends the notice of redemption to the warrant holders.

Simultaneously with Artius's initial public offering, Artius consummated a private placement of 11,326,667 Private Placement Warrants with the Sponsor. The Private Placement Warrant is exercisable for one share of Class A Common Stock at a price of $11.50 per share, subject to adjustment. The Private Placement Warrants are identical to the Public Warrants, except that: (1) the Private Placement Warrants and the shares of Class A Common Stock issuable upon exercise of the Private Placement Warrants are not transferable, assignable or salable until the earliest to occur of: (i) 365 days after the date of the Closing; (ii) the first day after the date on which the closing price of the Public Shares (or any successor securities thereto) equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within any 30-trading day period commencing at least 150 days after the date of the Closing; or (iii) the date on which Artius completes a liquidation, merger, capital stock exchange, reorganization or other similar transaction that results in all of Artius's Public Shareholders having the right to exchange their Public Shares (or any successor securities thereto) for cash, securities or other property, subject to certain limited exceptions, (2) the Private Placement Warrants will be exercisable on a cashless basis and be non-redeemable, except if the reference value equals or exceeds $10.00 and is less than $18.00 (as described above), so long as they are held by the initial purchasers or their permitted transferees, and (3) the Private Placement Warrants and the Class A ordinary shares issuable upon exercise of the Private Placement Warrants will be entitled to registration rights. If the Private Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Placement Warrants will be redeemable under all redemption scenarios by the Company and exercisable by such holders on the same basis as the Public Warrants.

The Company concluded the Public Warrants and Private Placement Warrants, or Assumed Common Stock Warrants, meet the definition of a derivative under ASC 815 and are recorded as liabilities. Upon consummation of the Business Combination, the fair value of the Assumed Common Stock Warrants was recorded on the Condensed Consolidated Balance Sheet. The fair value of the Assumed Common Stock Warrants was remeasured on the June 30, 2021 Condensed Consolidated Balance Sheet at $69.2 million with a gain of $14.2 million recorded in the three months and six months ended Condensed Consolidated Statement of Operations.

16. Stockholders' Equity

As of June 30, 2021, 1,010,000,000 shares, $0.0001 par value per share are authorized, of which, 1,000,000,000 shares are designated as Common Stock and 10,000,000 shares are designated as Preferred Stock.

Common Stock

Holders of the common stock are entitled to dividends when, as, and if, declared by the Board, subject to the rights of the holders of all classes of stock outstanding having priority rights to dividends. As of June 30, 2021, the Company had not declared any dividends. The holder of each share of Common Stock is entitled to one vote. There were 136,746,470 and 70,266,925 shares of common stock outstanding as of June 30, 2021 and December 31, 2020, respectively.

Stock option plan

Prior to Business combination, the Company maintained its 2010 Stock Incentive Plan and 2020 Equity Incentive Plan, each as amended (together, the "Stock Plan"). Upon closing of the Business Combination, awards under the 2010 and 2020 Plan were converted at the Exchange Ratio and the 2021 Equity Incentive Plan was adopted and approved. As of June 30, 2021 there were 18,467,109 shares of common stock reserved under the Stock Option Plan. Under the Stock Plan, options must be issued at prices no less than the estimated fair value of the stock on the date of grant and are exercisable for a period not exceeding 10 years from the date of grant. Options granted to employees under the Stock Plan generally vest 25% one year from the vesting commencement date and 1/36th per month thereafter, although certain arrangements call for vesting over other periods. Options granted to nonemployees under the Stock Plan vest over periods determined by the Board (generally immediate to four years).

The following tables summarize the activity under the Stock Plan:

	Outstanding Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)
Balance at December 31, 2020	8,222,710	$ 0.19	8.30
Granted	—	$ —	
Exercised	(118,019)	0.46	
Forfeited / canceled	—	—	
Balance as of March 31, 2021	8,104,691	$ 0.19	8.06
Granted	—		
Exercised	—		
Forfeited / Canceled	(158,735)	$ 0.14	
Balance as of June 30, 2021	7,945,956	$ 0.19	7.78
Vested and expected to vest at June 30, 2021	7,346,541		

During the quarter ended June 30, 2021, the Company did not grant any stock options.

As of June 30, 2021 and December 31, 2020, there were 2,696,439 and 2,537,704 options, respectively, available for grant under the Stock Plan. As of June 30, 2021 and December 31, 2020 there were 3,729,763 and 2,150,941 exercisable options, respectively. The aggregate intrinsic value of options vested and expected to vest at June 30, 2021 is $58,811,532.

The Company issued 2,920,732 of performance and market-based stock options during 2020. During the quarter ended March 31, 2021, the Company modified the vesting schedule of 529,119 of these performance and market based stock options such that vesting would be commence upon signing of the business combination. The Company entered into the Merger Agreement on February 16, 2021 resulting in the commencement of expense recognition related to these 529,119 options during the quarter ended March 31, 2021. For the remaining 2,391,613 performance and market-based stock options, expense commenced on the close date of the Merger, June 25, 2021, as that is the date when the performance condition was achieved.

During the three months ended June 30, 2021 and 2020, stock compensation expense of $3.5 million and $0, respectively, was recognized in general and administrative expenses on the unaudited condensed consolidated statements of operations and comprehensive income and loss. During the three months ended June 30, 2021 and 2020 stock compensation expense of $0.8 million and $0, respectively, was recognized in research and development expenses on the unaudited condensed consolidated statements of operations and comprehensive income and loss. Total remaining compensation expense to be recognized under the Stock Plan is $8.0 million as of June 30, 2021 and will be amortized on a straight-line basis over the remaining vesting periods of approximately four years.

17. Income Taxes

The provision for income taxes is recorded at the end of each interim period based on the Company's best estimate of its effective income tax rate expected to be applicable for the full fiscal year. There is no provision for income taxes because the Company has incurred operating losses since inception. The Company's effective income tax rate was 0% for the six months ended June 30, 2021 and 2020 and the realization of any deferred tax assets is not more likely than not.

18. Commitments and Contingencies

Commitments

In connection with the closing of the Business Combination, the Company entered into the Investor Rights Agreement on June 25, 2021 (the "Investor Rights Agreement"), pursuant to which the holders of Registrable Securities (as defined therein) became entitled to, among other things, customary registration rights, including demand, piggy-back and shelf registration rights. The Investor Rights Agreement also provides that the Company will pay certain expenses relating to such registrations and indemnify the registration rights holders against (or make contributions in respect of) certain liabilities which may arise under the Securities Act. On July 15, 2021, the Company registered the Registrable Securities for resale pursuant to a registration statement on Form S-1, as amended (File No. 333-257931) that became effective on July 30, 2021.

The Company leases office space and research and development space in Sacramento, California under noncancelable lease agreements, that expire in October 2025. Rental expense was $0.1 million for the three months ended June 30, 2021 and 2020.

In May 2018, the Company executed operating and maintenance agreements for certain services, to facilitate the development and thus bring Origin 1 to the condition necessary for its intended use, commencing in different periods between July 2018 and September 2019, and all generally for five-year periods. The agreements are generally automatically extended for one-year periods thereafter. The agreements include annual fixed payments subject to escalation clauses at the beginning of each calendar year, as defined in the agreement. The minimum fixed payments are $0.4 million (in Canadian dollars) per year over the fixed term. Certain of the agreements include quantities that are based on volumes, as defined in the applicable agreements. The Company is also responsible for applicable taxes under these agreements. During the three months ended June 30, 2021 and 2020, the total amount capitalized into Property, Plant and Equipment, Net under the agreement was $0.1 million.

In May 2019, the Company also concurrently executed a take-or-pay steam supply agreement commencing by October 1, 2019, through December 31, 2022, whereby the Company will receive up to 25% for the first year and 50% thereafter of the steam generated, up to 140,000 MMBtus per year. The price paid for the steam is based on a fixed amount plus the supplier's cost of natural gas, as defined in the agreement. During the three months ended June 30, 2021 and 2020, the total amount capitalized into Property, Plant and Equipment, Net under the agreement was $0.1 million.

In May 2018, the Company entered into a joint development agreement (the "JDA") with a stockholder to evaluate alternative uses for one of the Company's products. The term of the JDA is the later of (i) three years from the JDA effective date and (ii) the final expected development program completion date as specified in the JDA. There were no expenses under this agreement for the three months ended June 30, 2021 or 2020.

Patent licenses

In July 2017, the Company entered into a patent license agreement for $0.1 million, which expires upon expiration of the last patent in December 2025. Under this agreement, the Company will pay minimum royalty payments of $5,000 per year and, if the Company develops and sells certain products based on the patent, up to a maximum of $25,000 per year. Certain products that Origin is currently developing and anticipates selling are expected to utilize these patents.

In December 2016, the Company entered into a patent license agreement for $0.5 million, which expires upon expiration of the patent. Under this agreement, if the Company develops and sells specific products based on the patent, the Company would pay a royalty up to a cumulative $0.5 million from Origin 1, whereby no further payments will be due for any production at Origin 1. If production of those products occurs at subsequent facilities, the Company will pay an upfront license fee royalty and a variable royalty based on production at that subsequent facility, capped at an aggregate $10 million per facility. Certain products that the Company is currently developing and anticipates selling are expected to utilize these patents. No payments were made during the three months ended June 30, 2021 or 2020.

In November 2016, the Company entered into a patent license agreement for $35,000, which expires upon expiration of the patent. Under this agreement, if the Company produces products based on the patent, the Company will pay an annual royalty upon commencement of operations on Origin 1 of $25,000 up to a cumulative $1 million. The pipeline of Company products and sales are not currently expected to be subject to this patent. No payments were made during the three months ended June 30, 2021 or 2020.

In August 2015, the Company entered into a patent license agreement, which expires upon expiration of the patent. Under this agreement, if the Company develops and sells specific products based on the patent, the Company would pay a royalty up to $2 million per year and $10 million in the aggregate. Certain products that the Company is currently developing and anticipates selling are expected to utilize these patents. No payments were made during the three months ended June 30, 2021 or 2020.

In June 2011, the Company entered into a nonexclusive patents license agreement, which expires upon expiration of the last patent to expire. Under this agreement, the Company pays a royalty of $5,000 annually and if the Company develops and sells specific products based on the patent, 0.4% of net sales. The pipeline of Company products and sales are not currently expected to be subject to this patent.

Contingencies

At times there may be claims and legal proceedings generally incidental to the normal course of business that are pending or threatened against the Company. Although the Company cannot predict the outcome of these matters when they arise, in the opinion of management, any liability arising from them will not have a material adverse effect on the consolidated financial position, results of operations, or liquidity of the Company. At June 30, 2021 and December 31, 2020, there were no claims or legal proceedings.

19. Basic and Diluted Net Loss Per Share

The following table sets forth the computation of basic and diluted net income (loss) per share attributable to common stockholders, which excludes sponsor vesting shares which are legally outstanding, but subject to return to the Company. Basic net income (loss) per share is computed by dividing net income (loss) for the period by the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per share is computed by computed by dividing net income (loss) for the period by the weighted-average number of common shares outstanding during the period, plus the dilutive effect of the convertible preferred stock warrants, as applicable pursuant to the treasury stock method, and the convertible notes, as applicable pursuant to the if-converted method. The following table sets forth the computation of basic and diluted net income (loss) per share:

(In thousands, except for share and per share amounts)	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Numerator:				
Net income (loss) attributable to common stockholders—Basic	$ 62,531	$ (1,693)	$ 8,960	$ (3,663)
Remeasurement of preferred stock warrant liability	(13,076)	—	—	—
Net income (loss) attributable to common stockholders—Diluted	$ 49,455	$ (1,693)	$ 8,960	$ (3,663)
Denominator:				
Weighted-average common shares outstanding—Basic (1)	67,548,052	62,545,293	65,098,310	62,544,604
Stock options	5,831,260	—	5,876,446	—
Warrants to purchase redeemable convertible preferred stock	5,249,279	—	—	—
Weighted-average common shares outstanding—Diluted (1)	78,628,591	62,545,293	70,974,743	62,544,604
Net income (loss per share)—Basic	$ 0.93	$ (0.03)	$ 0.14	$ (0.06)
Net income (loss per share)—Diluted	$ 0.63	$ (0.03)	$ 0.13	$ (0.06)

(1) Excludes weighted-average Sponsor Vesting Shares subject to return of 296,703 and 149,171 shares as of the three months and six months ended June 30, 2021, respectively.

Diluted earnings per share reflect the potential dilution of securities that could share in the earnings of an entity. As of June 30, 2021, options for 1,481,531 shares of common stock, earnout shares for 25,000,000 shares of common stock, and Sponsor Vesting Shares for 4,500,000 shares of common stock were excluded from the table below because they are subject to performance conditions that were not achieved as of such date.

The following outstanding shares of potentially dilutive securities were excluded from the computation of diluted net loss per share attributable to common stockholder for the periods presented because including them would have been antidilutive:

	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Options to purchase common stock	—	1,981,176	—	1,981,176
Warrants to purchase common stock	35,476,667	—	35,476,667	—
Warrants to purchase redeemable convertible preferred stock, as-converted	—	5,554,470	—	5,554,470

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

On June 25, 2021, Artius Acquisition, Inc consummated the Business Combination with Legacy Origin pursuant to the Merger Agreement. In connection with the closing of the Business Combination, Artius changed its name to Origin Materials, Inc. Legacy Origin was deemed to be the accounting acquirer in the Merger. While Artius was the legal acquirer in the Merger, because Legacy Origin was deemed the accounting acquirer, the historical consolidated financial statements of Legacy Origin became the historical consolidated financial statements of the combined company, upon the consummation of the Merger.

The following discussion and analysis should be read in conjunction with our unaudited condensed consolidated financial statement the related notes appearing elsewhere in this Report. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the sections titled "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors" as set forth elsewhere in this Report. Unless the context otherwise requires, references in this section to "Legacy Origin", "the Company", "we", "us" and "our" refer to the business and operations of Legacy Origin and its consolidated subsidiaries prior to the Business Combination and to Origin Materials, Inc. and its consolidated subsidiaries, following the Closing.

Overview

Origin is a carbon negative materials company with a mission to enable the world's transition to sustainable materials by replacing petroleum-based materials with decarbonized materials in a wide range of end products, such as food and beverage packaging, clothing, textiles, plastics, car parts, carpeting, tires, adhesives, soil amendments and more. We believe that our platform technology can help make the world's transition to "net zero" possible and support the fulfillment of greenhouse gas reduction pledges made by countries as part of the United Nations Paris Agreement as well as corporations that are committed to reducing emissions in their supply chains. Our technology converts sustainable feedstocks such as sustainably harvested wood, agricultural waste, wood waste and even corrugated cardboard into materials and products that are currently made from fossil feedstocks such as petroleum and natural gas. These sustainable feedstocks are not used in food production, which differentiates our technology from other sustainable materials companies that use feedstocks such as vegetable oils or high fructose corn syrup and other sugars. While we have has succeeded in producing small amounts of our products in the pilot plant for customer trials and testing purposes, we have has not yet commenced large-scale production.

We believe that products made using our platform technology can compete directly with petroleum-derived products on both performance and price. Due to abundant and renewable wood supplies that have historically stable pricing, our cost of production is expected to be more stable than potential competing platforms that use other types of feedstocks. We believe that end products made using our platform technology will have a significant unit cost advantage over products made from other low carbon feedstocks.

We have developed a proprietary platform technology to convert biomass, or plant-based carbon, into the versatile "building block" chemicals CMF and HTC, as well as other product intermediates. At a commercial scale, our platform technology is expected to produce CMF and HTC with a negative carbon footprint. Origin believes these chemicals can replace petroleum-based counterparts, lowering the carbon footprint of a wide range of materials without sacrificing performance or cost.

We are currently developing and constructing our first manufacturing plant in Ontario, Canada (Origin 1), which is expected to become operational by the end of 2022. We are also currently in the planning phase for the construction of a significantly larger manufacturing plant (Origin 2), which is expected to become operational in 2025.

Impact of the COVID-19 Pandemic

In March 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. The pandemic has resulted in governments around the world implementing increasingly stringent measures to help control the spread of the virus, including quarantines, “shelter in place” and “stay at home” orders, travel restrictions, business curtailments, school closures and other measures. In addition, governments and central banks in several parts of the world have enacted fiscal and monetary stimulus measures to counteract the impacts of the COVID-19 pandemic.

We continue to monitor the rapidly evolving conditions and circumstances, as well as guidance from international and domestic authorities, including public health authorities, and we may need to take additional actions based on their recommendations. There is considerable uncertainty regarding the impact on our business stemming from current measures and potential future measures that could restrict access to our facilities, limit manufacturing and support operations and place restrictions on our workforce and suppliers. The measures implemented by various authorities related to the COVID-19 outbreak have caused us to change our business practices including those related to where employees work, the distance between employees in our facilities, limitations on in-person meetings between employees and with customers, suppliers, service providers and stakeholders, as well as restrictions on business travel to domestic and international locations or to attend trade shows, investor conferences and other events.

The full extent to which the ongoing COVID-19 pandemic adversely affects our financial performance will depend on future developments, many of which are outside of our control, that are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the pandemic, its severity, the effectiveness of actions to contain the virus (including the availability and effectiveness of vaccines) or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. The COVID-19 pandemic could also result in additional governmental restrictions and regulations, which could harm Origin’s business and financial results. In addition, a recession, depression or other sustained adverse market impact resulting from COVID-19 could harm our business and its access to needed capital and liquidity. Even after the COVID-19 pandemic has subsided, Origin may continue to experience adverse impacts on its business and financial performance as a result of the global economic impact of the COVID-19 pandemic.

To the extent that the COVID-19 pandemic adversely affects our business, results of operations, financial condition or liquidity, it may also heighten other risks, such as the risk that, if the business impacts of COVID-19 carry on for an extended period, we may be required to recognize impairments for certain long-lived assets including amortizable intangible assets.

Key Factors and Trends Affecting Origin’s Operating Results

We are a pre-revenue company. We believe that our performance and future success depend on several factors that present significant opportunities for us but also pose risks and challenges, including those discussed below and under “Risk Factors” appearing elsewhere in this Report.

Basis of Presentation

We currently conduct our business through one operating segment. As a pre-revenue company with no commercial operations, our activities to date have been limited, and our historical results are reported under U.S. GAAP and in U.S. Dollars. Upon commencement of commercial operations, we expect to expand our operations substantially, including in the United States and Canada, and as a result, we expect its future results to be sensitive to foreign currency transaction and translation risks and other financial risks that are not reflected in its historical financial statements. As a result, we expect that the financial results we report for periods after we begin commercial operations will not be comparable to the financial results included in this Report.

Components of Results of Operations

We are a pre-revenue company and our historical results may not be indicative of our future results for reasons that may be difficult to anticipate. Accordingly, the drivers of our future financial results, as well as the components of such results, may not be comparable to our historical or projected results of operations.

Research and Development Expenses

To date, our research and development expenses have consisted primarily of development of our four key product intermediates CMF, HTC, levulinic acid and furfural, and the conversion of those intermediates into products familiar to and desired by our customers, such as PX and PET. Our research and development expenses also include investments associated with the expansion of the Origin 1 plant and planning and construction of the Origin 2 plant, including the material and supplies to support product development and process engineering efforts. As we ramp up our engineering operations to complete the development of the Origin 1 and Origin 2 plants, we anticipate that research and development expenses will increase significantly in the foreseeable future, due to expansion in hiring and increase in investment in additional plant and equipment for product development and testing.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related costs, including stock-based compensation, professional fees, including, the costs of accounting, audit, legal, regulatory and tax compliance.

Additionally, costs related to advertising, trade shows, corporate marketing, as well as an allocated portion of our occupancy costs also comprise general and administrative expenses.

Change in Fair Value of Assumed Common Stock Warrant Liability

The change in fair value of Assumed Common Stock Warrant liabilities consists of the change in fair value of the Public Warrants and Private Placement Warrants assumed in connection with the Business Combination. We expect to incur an incremental income (expense) for the fair value adjustments for the outstanding Assumed Common Stock Warrant liabilities at the end of each reporting period or through the exercise of the warrants.

Other (Income) Expense

Our other income (expense) consists of income from governmental grant programs, interest expense for convertible notes and income or expenses related to changes in the fair value of redeemable convertible preferred stock warrants liability and derivative liability.

Income Tax Expense (Benefit)

Our income tax provision consists of an estimate for U.S. federal and state income taxes based on enacted rates, as adjusted for allowable credits, deductions, uncertain tax positions, changes in deferred tax assets and liabilities, and changes in the tax law. We maintain a valuation allowance against the full value of our U.S. and state net deferred tax assets because we believe the recoverability of the tax assets is not more likely than not.

Non-GAAP Measures

To provide investors with additional information in connection with our results as determined in accordance with GAAP, we disclose Adjusted Net Income as a non-GAAP measure. This measure is not a financial measure calculated in accordance with GAAP, and it should not be considered as a substitute for net income, operating income, or any other measure calculated in accordance with GAAP, and may not be comparable to similarly titled measures reported by other companies.

Adjusted EBITDA

We believe that the presentation of Adjusted Earnings before Interest, Taxes, Depreciation, and Amortization (Adjusted EBITDA) is appropriate to provide additional information to investors about our operating profitability adjusted for certain non-cash items, non-routine items that we do not expect to continue at the same level in the future, as well as other items that are not core to our operations. Further, we believe Adjusted EBITDA provides a meaningful measure of operating profitability because we use it for evaluating our business performance, making budgeting decisions, and comparing our performance against that of other peer companies using similar measures.

We define Adjusted EBITDA as net income or loss adjusted for (i) stock-based compensation expense, (ii) depreciation and amortization, (iii) interest expense, net of capitalized interest, (iv) change in fair value of derivative liability, (v) change in fair value of warrants liability, (vi) change in fair value of earnout liability, and (vii) other income, net.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net Income (loss)	$ 62,531	$(1,693)	$ 8,961	$(3,663)
Stock based compensation	3,545	9	4,172	18
Depreciation and amortization	121	100	236	204
Interest expense, net of capitalized interest	2,560	50	2,839	113
Change in fair value of derivative liability	1,035	(12)	1,426	(15)
Change in fair value of warrants liability	(27,265)	105	20,844	105
Change in fair value of earnout liability	(45,497)	—	(45,497)	—
Other Income, net	(42)	(157)	(624)	(168)
Adjusted EBITDA	$ (3,012)	$(1,598)	$ (7,643)	$(3,406)

Results of Operations

Comparison of the Six Months Ended June 30, 2021 and 2020

The following table summarizes the Company's results of operations with respect to the items set forth in such table for the six months ended June 30, 2021 and 2020 together with the change in such items in dollars and as a percentage.

	Six Months Ended June 30,			
(in thousands)	2021	2020	Variance	Variance %
Operating expenses:				
Research and development	$ 3,648	$ 2,122	$ 1,526	72%
General and administrative expenses	8,167	1,302	6,865	527%
Depreciation and amortization	236	204	32	15%
Total operating expenses and loss from operations	12,051	3,628	8,423	232%
Other (income) expenses:				
Interest expense, net of capitalized interest	2,839	113	2,726	n.m
Change in fair value of derivative liability	1,426	(15)	1,441	n.m
Change in fair value of warrant liability	20,844	105	20,739	n.m
Change in fair value of earnout liability	(45,497)	—	(45,497)	n.m
Other income, net	(623)	(168)	(455)	271%
Total other expense (income), net	(21,011)	35	(21,046)	n.m
Net Income (Loss)	$ 8,960	$(3,663)	$ 12,623	(345)%

n.m. – not meaningful.

Research and Development Expenses

Research and development expenses increased $1.5 million, or 72%, from 2020 compared to 2021. This increase was primarily due to increases of $1.0 million in stock compensation related to additional stock grants and $0.5 million related to incremental research and development staffing.

General and Administrative Expenses

General and administrative expenses increased $6.8 million, or 527%, from 2020 compared to 2021. This increase was primarily related to increased of $3.2 million in stock compensation expenditures and $3.4 million supporting construction of Origin 1, including additional hiring of personnel within executive, accounting, procurement, sales, and supply-chain development, as well as services in support of the Merger.

Interest Income (expense)

Interest expense increased $2.7 million from 2020 compared to 2021. This is due to the conversion of stockholder convertible notes as a result of the business combination and the elimination of the associated debt discount.

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Change in fair value of derivative liability, warrant liability, and earnout liability

The fair values of the derivative liability, the warrant liability, and the earnout liability decreased a total of $23.3 million from 2020 to 2021. The earnout liability and a portion of the change in the warrant liability are from newly created liabilities from the business combination, with a combined decrease in fair value of $59 million resulting from the change in fair value of these instruments over the period from the closing of the merger to June 30, 2021. The remaining combined increase in fair value of $82.3 million resulting from an increase in the liabilities due to the closing of the business combination becoming more likely, eventually occurring on June 25, 2021.

Other Income, net

Other expense increased a total of $0.5 million from 2020 compared to 2021. This change was primarily due to increasing funding from government grants.

Comparison of the Three Months Ended June 30, 2021 and March 31, 2021

The following table summarizes the Company's results of operations with respect to the items set forth in such table for the three months ended June 30, 2021 and 2020 together with the change in such items in dollars and as a percentage.

	Three Months Ended			
(in thousands)	June 30, 2021	March 31, 2021	Variance	Variance%
Operating expenses:				
Research and development	$ 2,339	$ 1,309	$ 1,030	79%
General and administrative expenses	4,219	3,948	271	7%
Depreciation and amortization	121	115	6	5%
Total operating expenses and loss from operations	6,679	5,372	1,307	24%
Other (income) expenses:				
Interest income	2,560	279	2,281	n.m
Change in fair value of derivative liability	1,035	391	644	165%
Change in fair value of warrant liabilities	(27,265)	48,109	(75,374)	(157)%
Change in fair value of earnout liability	(45,497)	—	(45,497)	n.m
Other income, net	(42)	(581)	538	(93)%
Total other (income) expenses, net	(69,210)	48,198	(117,408)	(244)%
Net Income (loss)	$ 62,531	$ (53,570)	$ 116,101	217%

Research and Development Expenses

Research and development expenses increased $1.0 million, or 79%, from the previous quarter. This increase was due to increases of $0.7 million in stock compensation related to additional stock grants and $0.3 million related to incremental research and development staffing.

General and Administrative Expenses

General and administrative expenses increased $0.3 million, or 7%, from the previous quarter. This increase was primarily related to increased stock compensation expenditures of $2.3 million and $0.4 million supporting construction of Origin 1, including additional hiring of personnel within executive, accounting, procurement, sales, and supply-chain development, offset by a decrease of $2.3 million in expenditures in preparation of efforts preceding the Merger Agreement.

Interest Income (expense)

Interest income (expense) decreased $2.3 million from the previous quarter. This is due to the conversion of stockholder convertible notes as a result of the business combination and the elimination of the associated debt discount.

Change in fair value of derivative liability, warrant liability, and earnout liability

The fair values of the derivative liability, the warrant liability, and the earnout liability decreased a total of $120.2 million from the previous quarter. The earnout liability and a portion of the change in the warrant liability are from newly created liabilities from the business combination, with a combined decrease in fair value of $59 million resulting from the change in fair value of these instruments over the period from the closing of the merger to June 30, 2021. The remaining combined increase in fair value of $179.2 million resulting from an increase in the liabilities due to the closing of the business combination becoming more likely, eventually occurring on June 25, 2021.

Other Income, net

Other expense decreased a total of $0.6 million from the previous quarter. This change was primarily due to increasing funding from government grants.

Liquidity and Capital Resources

Sources of Liquidity

Since inception, we have financed our operations principally from the sales and issuances of redeemable preferred stock and convertible notes, and governmental grant programs. Origin had $470.9 million and $1.9 million in cash, cash equivalents and restricted cash as of June 30, 2021 and December 31, 2020, respectively. Our cash equivalents are invested primarily in U.S. Treasury money market funds and Origin's marketable securities are primarily U.S. Treasury notes and bonds.

We are yet to generate any revenue from our business operations. Our ability to successfully develop the products, commence commercial operations and expand the business will depend on many factors, including our ability to meet the working capital needs, the availability of equity or debt financing and, over time, our ability to generate cash flows from operations.

We will require a significant amount of cash for capital expenditures as we invest in the construction of Origin 1 and Origin 2 plants, and additional research and development. In addition to our cash on hand following the Business Combination, including the proceeds from the PIPE Investment, we anticipate that we will need substantial additional project financing and government incentives to meet our financial projections, execute our growth strategy and expand our manufacturing capability, including to finance the construction of the Origin 1 and Origin 2 plants. Our ability to obtain financing for the construction of future plants may depend in part on our ability to first enter into customer agreements sufficient to demonstrate sufficient demand to justify the construction of such plants. We may also raise additional capital through equity offerings or debt financings, as well as through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties. Our future capital requirements will

depend on many factors, including actual construction costs of the Origin 1 and Origin 2 plants, changes in the costs in our supply chain, expanded operating activities and our ability to secure customers. If our financial projections are inaccurate, we may need to seek additional equity or debt financing from outside sources, which may not be available on acceptable terms, if at all. If we are unable to raise additional capital when required, our business, financial condition and results of operations would be harmed.

We expect to continue to incur operating losses in the near term as our operating and capital expenses will increase to support the growth of the business. We expect that our general and administrative expenses and research and development expenses will continue to increase as we increase our sales and marketing activities, develop our distribution infrastructure, support our growing operations and operate as a public company.

Indebtedness

In November 2019, Legacy Origin entered into secured convertible note agreements (the "2019 Notes") with certain Legacy Origin preferred stockholders, whereby Legacy Origin can borrow up to $6.0 million in aggregate from the noteholders. The 2019 Notes bear an annual interest rate of 10% and mature on September 30, 2021. All principal and accrued interest under the 2019 Notes were converted into shares of Legacy Origin Common Stock immediately prior to the closing of the Business Combination.

In April 2020, Legacy Origin received an unsecured loan in the amount of $905,838 under the Paycheck Protection Program (the "PPP Loan"). The Paycheck Protection Program was established under the CARES Act and is administered by the U.S. Small Business Administration. The PPP Loan has a two-year term and bears interest at a rate of 1.00% per annum. This loan was repaid on June 24, 2021.

As of June 30, 2021 and December 31, 2020, we have $6.4 million and $6.2 million of indebtedness under a Canadian government program, respectively, of which $2.7 million was received in 2020 and $0.1 million was received during the six months ended June 30, 2021. Additionally, as of June 30, 2021, we had liability balances consisting of a $5.2 million customer prepayment and $5.6 million related party liabilities. As of December 2020, we had liability balances consisting of a $2.5 million customer prepayment, a $5.5 million stockholder note, and a $5.2 million customer prepayment.

During 2020, we received $550,000 for the admission of an additional member to a consortium agreement with two Series B preferred stock investors and a Series C investor to collaborate on development of a process to commercialize bio-based, decarbonizing materials for application on an industrial scale at a competitive price. These funds were recorded as other income, net, in the condensed consolidated statement of operations and comprehensive income and loss.

In February 2021, Legacy Origin issued and sold convertible promissory notes with an aggregate principal amount of $10.0 million and an interest rate of 8.0% per annum (the "2021 Notes"). The 2021 Notes mature on September 30, 2021. All principal and accrued interest on the 2021 Notes were converted into shares of Legacy Origin Common Stock immediately prior to the closing of the Business Combination.

In November 2016, Legacy Origin received a $5.0 million prepayment from a stockholder for product from Origin 1 pursuant to an Offtake Agreement. The prepayment was to be credited against the purchase of products over the term of the agreement. The prepayment was secured by a promissory note to be repaid in cash in the event that the prepayment could not be credited against the purchase of product, for example, if Origin 1 is never constructed. The promissory note was collateralized substantially by Origin 1 and other assets of Origin Material Canada Pioneer Limited. In May 2019, Legacy Origin and the stockholder amended the offtake agreement and promissory note. The amendment added accrued interest of $189,169 to the principal balance of the prepayment and provided for the prepayment amount to be repaid in three annual installments rather than being applied against the purchase of product from Origin 1. The promissory note would bear interest at 3.50% per annum and be repaid in three installments

of $2.2 million, $2.1 million and $2.1 million (inclusive of accrued but unpaid interest) on December 20, 2024, December 19, 2025, and December 18, 2026, respectively, unless the 2019 Notes have not been converted or repaid by December 30, 2021, in which case the promissory note maturity date would be December 31, 2021. The promissory note is subordinate to the 2019 Notes. At June 30, 2021 and December 31, 2020, the total aggregate principal amount of debt outstanding was $5.2 million and accrued interest totaled $0.4 million and $0.3 million, respectively.

Prepayments

In November 2016, Legacy Origin received a $5.0 million prepayment from a stockholder for product from Origin 1 pursuant to an Offtake Agreement. The prepayment is to be credited against the purchase of products from Origin 1 over the term of the Offtake Agreement. Specifically, repayment is effected by applying a credit to product purchases each month over the first five years of operation of Origin 1 up to $7.5 million, which is equal to 150% of the prepayment amount. If product purchases are not sufficient to recover the advances, the application of the credit to purchases as payment of the advances will continue until fully repaid. The prepayment is secured by a note to be repaid in cash in the event the prepayment cannot be credited against the purchase of product, for example, if Origin 1 is never constructed. The note is collateralized substantially by Origin 1 and other assets of Origin Material Canada Pioneer Limited. If repaid in cash, the note bears an annual interest rate of the three-month London Interbank Offered Rate (LIBOR) plus 0.25% (0.44% at March 31, 2021) and matures five years from the commercial operation date of Origin 1, unless the 2019 Notes have not been converted or repaid by December 30, 2021, in which case the note maturity date would be December 31, 2021. The note is subordinated to the 2019 Notes. At June 30, 2021 and December 31, 2020 the total note principal outstanding was $5.1 million plus accrued interest of $0.5 million and $0.1 million, respectively.

In September 2019, Legacy Origin entered into a $5.0 million prepayment agreement for the purchase of products from Origin 2. The prepayment is to be made in two equal installments: the first $2.5 million was in October 2019 and the remaining $2.5 million is due within 30 days of the customer confirming that a sample from Origin 1 meets the customer's specifications. We and the customer agreed to work in good faith to execute an Offtake Agreement, the agreed terms of which are set forth in the prepayment agreement, whereby 100% of the prepayment will be applied against future purchases. The prepayment agreement provides the customer a capacity reservation of up to a specified annual volume of product from Origin 1 for a term of ten years, pursuant to the terms of an Offtake Agreement. At June 30, 2021 and December 31, 2020, the total amount outstanding on this agreement was $2.5 million.

Cash Flows for the Six Months Ended June 30, 2021 Compared to the Six Months Ended June 30, 2020

The following table shows a summary of cash flows for the six months ended June 30, 2021 and 2020:

	Six Months Ended June 30,	
(in thousands)	2021	2020
Total cash used in operating activities	$ (6,675)	$ (2,271)
Total cash used in investing activities	(2,703)	(1,267)
Total cash provided by financing activities	478,559	1,962
Effects of foreign exchange rate changes on the balance of cash and cash equivalents, and restricted cash held in foreign currencies	(178)	184
Net increase (decrease) in cash	$ 469,003	$ (1,392)

Cash Used in Operating Activities

Net cash used in operating activities was $6.7 million for the six months ended June 30, 2021, compared to net cash used in operating activities of $2.3 million over the same period in 2020. The decrease was primarily attributable to an increase in net loss (after adjusting for non-cash items) and decreases in accounts payable.

Cash Used in Investing Activities

Net cash used in investing activities was $2.7 million for the six months ended June 30, 2021, compared to net cash used in investing activities of $1.3 million over the same period in 2020. The Company continues to increase activity related to the construction of Origin 1, which is the main driver of the variation in cash used in investing activities between the two periods.

Cash Provided by Financing Activities

Net cash from financing activities was $479 million for the six months ended June 30, 2021, compared to net cash from financing activities of $2 million over the same period in 2020. The Company completed a business combination during the current period, netting cash proceeds of $467 million. Cash of $11.7 million was provided by proceeds from notes payable, and payments of $0.9 million were made on short term debt.

Off-Balance Sheet Arrangements

The Company did not have any off-balance sheet arrangements during the periods presented, as defined in the rules and regulations of the SEC.

Critical Accounting Policies and Estimates

Our financial statements have been prepared in accordance with U.S. GAAP. In the preparation of these condensed consolidated financial statements, we are required to use judgment in making estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the financial statements, as well as the reported expenses incurred during the reporting periods.

We consider an accounting judgment, estimate or assumption to be critical when (1) the estimate or assumption is complex in nature or requires a high degree of judgment and (2) the use of different judgments, estimates and assumptions could have a material impact on the consolidated financial statements. Our significant accounting policies are described in Note 3 to our unaudited condensed consolidated financial statements included elsewhere in this Report. We have the critical accounting policies and estimates which are described below.

Stock-Based Compensation

Origin measures stock options and other stock-based awards granted to employees, directors and other service providers based on their fair value on the date of grant and recognizes compensation expenses of those awards over the requisite service period, which is generally the vesting period of the respective award. Origin estimates forfeitures at the grant date based on historical activity of the grantee class and adjust stock-based compensation expenses based on that historical percentage. Origin applies the straight-line method of expense recognition to all awards with only service-based vesting conditions.

Origin estimates the fair value of each stock option grant on the date of grant using the Black-Scholes option-pricing model, which requires the use of highly subjective assumptions including:

• *Expected Term*—Origin have opted to use the “simplified method” for estimating the expected term of plain-vanilla options, whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the option (generally 10 years).

• *Risk-Free Interest Rate*—The risk-free rate assumption is based on the U.S. Treasury zero-coupon instruments with maturities similar to the expected term of Origin’s stock options.

• *Expected Dividend*—Origin has not issued any dividends and does not anticipate issuing dividends on Origin’s common stock. As a result, Origin has estimated the dividend yield to be zero.

• *Expected Volatility*—Due to Origin’s limited operating history and a lack of company-specific historical and implied volatility data, Origin has based its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility data was computed using the daily closing prices for the various companies’ shares during the equivalent period of the calculated expected term of the stock-based awards.

Warrant Liability

We account for the Warrants in accordance with the guidance contained in ASC 815-40-15-7D and 7F under which the Warrants do not meet the criteria for equity treatment and must be recorded as liabilities. Accordingly, we classify the Warrants as liabilities at their fair value and adjust the Warrants to fair value at each reporting period. This liability is subject to re-measurement at each balance sheet date until exercised, and any change in fair value is recognized in our statement of operations. The Private Warrants and the Public Warrants for periods where no observable traded price was available are valued using a Monte Carlo simulation. For periods subsequent to the detachment of the Public Warrants from the Units, the Public Warrant quoted market price was used as the fair value as of each relevant date.

Earnout Liability

The Company has recorded an earnout liability related to future contingent equity shares related to the Business Combination (note 13). The Company recorded these instruments as liabilities on the condensed consolidated balance sheet at fair value, with subsequent changes in their respective fair values recognized in earnings at each reporting date.

Net Loss Per Ordinary Share

We apply the two-class method in calculating earnings per share. Ordinary shares subject to possible redemption, which are not currently redeemable and are not redeemable at fair value, have been excluded from the calculation of basic net loss per ordinary share since such shares, if redeemed, only participate in their pro rata share of the Trust Account earnings. Our net income is adjusted for the portion of income that is attributable to ordinary shares subject to redemption, as these shares only participate in the earnings of the Trust Account and not our income or losses.

Recent Accounting Pronouncements

See Note 5 to the condensed consolidated financial statements in this Report for more information about recent accounting pronouncements, the timing of their adoption, and our, to the extent it has made one, of their potential impact on our financial condition and its results of operations and cash flows.

Emerging Growth Company Status

Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can choose not to take advantage of the extended transition period and comply with the requirements that apply to non-emerging growth companies, and any such election to not take advantage of the extended transition period is irrevocable.

The Company is an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933, as amended (the "Securities Act") and has elected to take advantage of the benefits of the extended transition period for new or revised financial accounting standards. The Company may decide to early adopt such new or revised accounting standards to the extent permitted by such standards. This may make it difficult or impossible to compare our financial results with the financial results of another public company that is either not an emerging growth company or is an emerging growth company that has chosen not to take advantage of the extended transition period exemptions because of the potential differences in accounting standards used.

We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of our Common Stock that is held by non-affiliates equals or exceeds $700 million as of the end of that year's second fiscal quarter, (ii) the last day of the fiscal year in which we have total annual gross revenue of $1.07 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we have issued more than $1 billion in non-convertible debt in the prior three-year period or (iv) December 31, 2026. We will no longer qualify as an emerging growth company for Securities Act or Exchange Act reporting after December 31, 2021.

Implications of being a Smaller Reporting Company

Additionally, we qualify as a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our Common Stock held by non-affiliates exceeds $250 million as of the end of that year's second fiscal quarter, or (ii) our annual revenues exceeded $100 million during such completed fiscal year and the market value of our Common Stock held by non-affiliates equals or exceeds $700 million as of the end of that year's second fiscal quarter. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of our financial statements with other public companies difficult or impossible. We will no longer qualify as a smaller reporting company for Securities Act or Exchange Act reporting after December 31, 2021.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The Company is exposed to a variety of markets and other risks, including the effects of change in interest rates, inflation and foreign currency translation and transaction risks, as well as risks to the availability of funding sources, hazard events and specific asset risks.

Interest Rate Risk

The market interest risk in our financial instruments and our financial positions represents the potential loss arising from adverse changes in interest rates. As of June 30, 2021, we had cash and cash equivalents and marketable securities of $2.5 million, consisting of interest-bearing money market accounts and marketable securities, for which the fair market value would be affected by change in the general level of U.S. interest rates. However, due to the short-term maturities and the low-risk profile of our investments, an immediate 10% change in the interest rate would not have a material effect on the fair market value of our cash and cash equivalents and marketable securities.

Foreign Currency Risk

Our functional currency is the U.S. dollar, while certain of our current and future subsidiaries will be expected to have other functional currencies, reflecting their principal operating markets. We expect to be exposed to both currency transaction and translation risk. To date, we have not had material exposure to foreign currency fluctuations and have not hedged such exposure, although we may do so in the future.

Item 4. Controls and Procedures

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officers and chief financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Report.

The term "disclosure controls and procedures," as defined in Rules 13a15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the Securities and Exchange Commission, or SEC. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

In connection with the audit of our consolidated financial statements for the fiscal years ended December 31, 2019 and December 31, 2020, during the course of preparing for the Business Combination, as well as during the preparation of the unaudited condensed consolidated interim financial statements for this 10Q filing, we identified material weaknesses in our internal controls over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of its annual or interim financial statements will not be prevented or detected on a timely basis Specifically, we did not have in place an effective control environment with formal processes and procedures to allow for a detailed review of accounting transactions that would identify errors in a timely manner. In addition, due to our size, we did not have proper segregation of duties and had insufficient accounting and finance personnel with an appropriate level of technical accounting knowledge in the application of U.S. GAAP commensurate with our complexity and financial accounting and reporting requirements to design, implement and operate precise business processes and internal control activities over financial reporting to provide reasonable assurance of preventing or detecting material misstatements.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act), during the six months ended June 30, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting, other than as described below under the caption "Remediation Plan."

Remediation Plan

The Company is committed to remediating the material weakness to our internal control over financial reporting. We have begun implementing and are continuing to implement measures designed to improve our internal control over financial reporting to remediate these material weaknesses, including retention of an accounting consultant to assist in areas of complex accounting and financial reporting, converting and upgrading our accounting system and hiring additional IT personnel. We also plan to hire additional accounting personnel including a staff accountant, a corporate controller and/or a director of SEC reporting.

PART II. — OTHER INFORMATION

Item 1. Legal Proceedings

Information regarding legal proceedings is available in Note 18, Commitments and Contingencies—Contingencies, to the condensed consolidated financial statements in this Report.

Item 1A. Risk Factors

The following summary risk factors and other information included in this Report should be carefully considered. The summary risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not currently known to us or that we currently deem less significant may also affect our business operations or financial results. If any of the following risks actually occur, our stock price, business, operating results and financial condition could be materially adversely affected. For more information, see below for more detailed descriptions of each risk factor.

- We are an early stage company with a history of losses and our future profitability is uncertain, and our financial projections may differ materially from actual results.
- Our business plan assumes we can secure substantial additional project financing and government incentives, which may be unavailable on favorable terms, if at all.
- We have identified material weaknesses in our internal control over financial reporting and may identify additional material weaknesses in the future or fail to maintain effective internal control over financial reporting, which may result in material misstatements of our consolidated financial statements or result in failure to meet our periodic reporting obligations.
- Construction of our plants may not be completed in the expected timeframe or in a cost-effective manner. Any delays in the construction of our plants could severely impact our business, financial condition, results of operations and prospects.
- We plan to rely on our Origin 1 and Origin 2 plants to meet customer demand until 2027.
- We have not produced our products in large commercial quantities and may not manage growth effectively.
- Our offtake agreements with customers include liquidated damages, advance repayment and/or termination provisions that may be triggered if we fail to timely complete plant construction or commence our commercial operations.
- Our industry is highly competitive, and we may lose market share to producers of products that can be substituted for our products, which may have an adverse effect on our results of operations and financial condition.
- Increases or fluctuations in the costs of our raw materials may affect our cost structure.
- Compliance with extensive environmental, health and safety laws could require material expenditures, changes in our operations or site remediation.
- Our business relies on proprietary information and other intellectual property, and our failure to protect our intellectual property rights could harm our competitive advantages with respect to the use, manufacturing, sale or other commercialization of our processes, technologies and products, which may have an adverse effect on our results of operations and financial condition.

- We may face patent infringement and other intellectual property claims that could be costly to defend, result in injunctions and significant damage awards or other costs (including indemnification of third parties or costly licensing arrangements, if licenses are available at all) and limit our ability to use certain key technologies in the future or require development of non-infringing products or technologies, which may cause us to incur significant unexpected costs, prevent us from commercializing our products and otherwise harm our business.
- We rely on trade secrets to protect our technology, and our failure to maintain trade secret protection could limit our ability to compete.
- Our management has limited experience in operating a public company.

The following risk factors apply to our business and operations. These risk factors are not exhaustive, and investors are encouraged to perform their own investigation with respect to our business, financial condition and prospects. We may face additional risks and uncertainties that are not presently known to us, or that we currently deem immaterial, which may also impair our business. The following discussion should be read in conjunction with the unaudited financial statements and notes to such financial statements included elsewhere in this Report and the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this Report.

Risks Related to Our Business

Risks Related to Our Financial Condition and Status as an Early Stage Company

We are an early stage company with a history of losses and our future profitability is uncertain.

We have had a history of net losses due to our primary focus on research and development, plant construction, capital expenditures and early-stage commercial activities. For the years ended December 31, 2020 and 2019, we had net losses of $30.3 million and $0.5 million, respectively. For the six months ended June 30, 2021, we had a net income of $9.0 million. As of June 30, 2021, we had an accumulated deficit of $89.9 million.

We expect that our net losses will continue for the foreseeable future. Based on our estimates and projections, which are subject to significant risks and uncertainties, we do not expect to generate revenue until 2023 and do not expect to reach commercial scale production until 2025. Even if we are able to commercialize our products and generate revenue from product sales, we may not become profitable for many years, if at all.

Our potential profitability is dependent upon many factors, including our ability to complete construction of current and future plants, maintain an adequate supply chain, anticipate and react to demand for our products, manufacture our products on a commercial scale, secure additional customer commitments, and otherwise execute our growth plan. We expect the rate at which we will incur losses to be significantly higher in future periods as we:

- expand our commercial production capabilities and incur construction costs associated with building our plants;
- increase our expenditures associated with our supply chain, including sourcing primary feedstock for our products;

- increase our spending on research and development for new products;
- begin full scale commercial production of our products;
- increase our sales and marketing activities and develop our distribution infrastructure; and
- increase our general and administrative functions to support our growing operations and to operate as a public company.

Because we will incur the costs and expenses from these efforts before receiving meaningful revenue, our losses in future periods could be significant. We may find that these efforts are more expensive than we currently estimates or that these efforts may not result in revenues, which would further increase our losses.

We may not manage growth effectively.

Our failure to manage growth effectively could harm our business, results of operations and financial condition. We anticipate that a period of significant expansion will be required to address potential growth. This expansion will place a significant strain on our management, operational and financial resources. To manage the growth of our operations and personnel, we must establish appropriate and scalable operational and financial systems, procedures and controls and establish and maintain a qualified finance, administrative and operations staff. We may be unable to hire, train, retain and manage the necessary personnel or to identify, manage and exploit potential strategic relationships and market opportunities.

Our business plan assumes we can secure substantial additional project financing and government incentives, which may be unavailable on favorable terms, if at all.

We will need substantial additional project financing and government incentives in order to execute our growth strategy and expand our manufacturing capability. We have not yet secured such project financing and government incentives, and they may not be available on commercially reasonable terms, if at all. In particular, our ability to obtain financing for the construction of future plants may depend in part on our ability to first enter into customer agreements sufficient to demonstrate sufficient demand to justify the construction of such plants. If we are unable to obtain such financing and government incentives, or secure sufficient customer agreements, on commercially reasonable terms, or at all, we will not be able to execute our growth strategy.

To the extent that we raise additional capital in through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of those securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures or declaring dividends. Debt financing could also have significant negative consequences for our business, results of operations and financial condition, including, among others, increasing our vulnerability to adverse economic and industry conditions, limiting our ability to obtain additional financing, requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, thereby reducing the amount of our cash flow available for other purposes, limiting our flexibility in planning for, or reacting to, changes in our business, and placing us at a possible competitive disadvantage compared to less leveraged competitors or competitors that may have better access to capital resources.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or products, or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our commercialization, research and development efforts or grant rights to third parties to market and/or develop products that we would otherwise prefer to market and develop ourselves.

If we seek government grants, incentives or subsidies, their terms may be limiting or restrict certain of our planned operations, thereby requiring us to alter our operating plans and materially impacting our financial projections and projected results of operations. Government grants may also be terminated, modified or recovered under certain conditions without our consent.

We have identified material weaknesses in our internal control over financial reporting and may identify additional material weaknesses in the future or fail to maintain effective internal control over financial reporting, which may result in material misstatements of our consolidated financial statements or cause us to fail to meet our periodic reporting obligations.

In connection with the audit of our consolidated financial statements for the fiscal years ended December 31, 2019 and December 31, 2020, during the course of preparing for the Business Combination, as well as during the preparation of the unaudited condensed consolidated interim financial statements for this 10Q filing, we identified material weaknesses in our internal controls over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of its annual or interim financial statements will not be prevented or detected on a timely basis. Specifically, we did not have in place an effective control environment with formal processes and procedures to allow for a detailed review of accounting transactions that would identify errors in a timely manner. In addition, due to our size, we did not have proper segregation of duties and had insufficient accounting and finance personnel with an appropriate level of technical accounting knowledge in the application of U.S. GAAP commensurate with our complexity and financial accounting and reporting requirements to design, implement and operate precise business processes and internal control activities over financial reporting to provide reasonable assurance of preventing or detecting material misstatements. We restated our financial statements as of and for the fiscal years ended December 31, 2020 and 2019.

We have begun implementing and are continuing to implement measures designed to improve our internal control over financial reporting to remediate these material weaknesses, including retention of an accounting consultant to assist in areas of complex accounting and financial reporting, converting and upgrading our accounting system and hiring additional IT personnel. We also plan to hire additional accounting personnel including a staff accountant, a corporate controller and/or a director of SEC reporting.

If we are unable to successfully remediate our existing or any future material weaknesses in our internal control over financial reporting, or if we identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports in addition to applicable Nasdaq listing requirements, investors may lose confidence in our financial reporting and our stock price may decline as a result. We also could become subject to investigations by Nasdaq, the SEC or other regulatory authorities.

As a public company, we are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of its internal control over financial reporting for future annual reports on Form 10-K to be filed with the SEC. This assessment will need to include disclosure of any material weaknesses identified by management in our internal control over financial reporting. Our independent registered public accounting firm will also be required to audit the effectiveness of our internal control over financial reporting in future annual reports on Form 10-K to be filed with the SEC. We will be required to
disclose changes made in our internal control over financial reporting on a quarterly basis. Failure to comply with the Sarbanes-Oxley Act could potentially subject us to sanctions or investigations by the SEC, the applicable stock exchange or other regulatory authorities, which would require additional financial and management resources. We have begun the process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404 in the future, but we may not be able to complete its evaluation, testing and any required remediation in a timely fashion.

Changes in tax laws or tax rulings could materially affect our financial position, results of operations, and cash flows.

The tax regimes we are subject to or operate under, including income and non-income taxes, are unsettled and may be subject to significant change. Changes in tax laws, regulations, or rulings, or changes in interpretations of existing laws and regulations, could materially affect our financial position and results of operations. For example, the 2017 Tax Cuts and Jobs Act (the “Tax Act”) made broad and complex changes to the U.S. tax code, including changes to U.S. federal tax rates, additional limitations on the deductibility of interest, both positive and negative changes to the utilization of future net operating loss (“NOL”) carryforwards, allowing for the expensing of certain capital expenditures, and putting into effect the migration from a “worldwide” system of taxation to a more territorial system. Future guidance from the IRS with respect to the Tax Act may affect us, and certain aspects of the Tax Act could be repealed or modified in future legislation. The Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”) has already modified certain provisions of the Tax Act. In addition, it is uncertain if and to what extent various states will conform to the Tax Act, the CARES Act or any newly enacted federal tax legislation. The issuance of additional regulatory or accounting guidance related to the Tax Act could materially affect our tax obligations and effective tax rate in the period issued. In addition, many countries in Europe and a number of other countries and organizations, have recently proposed or recommended changes to existing tax laws or have enacted new laws that could significantly increase our tax obligations in the countries where we do business or require it to change the manner in which we operate our business.

The Organization for Economic Cooperation and Development has been working on a Base Erosion and Profit Shifting Project, and issued a report in 2015, an interim report in 2018, and is expected to continue to issue guidelines and proposals that may change various aspects of the existing framework under which our tax obligations are determined in many of the countries in which we do business. Similarly, the European Commission and several countries have issued proposals that would change various aspects of the current tax framework under which we are taxed. These proposals include changes to the existing framework to calculate income tax, as well as proposals to change or impose new types of non-income taxes, including taxes based on a percentage of revenue. For example, several countries have proposed or enacted taxes applicable to digital services, which could apply to our business.

As we expand the scale of our international business activities, these types of changes to the taxation of our activities could increase our worldwide effective tax rate, increase the amount of taxes imposed on our business, and harm our financial position. Such changes may also apply retroactively to our historical operations and result in taxes greater than the amounts estimated and recorded in our financial statements.

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our operating results and financial condition.

We are subject to taxation in Canada and other jurisdictions around the world with increasingly complex tax laws, the application of which can be uncertain. The amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax principles, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents, which could have an adverse impact on our liquidity and results of operations. In addition, the authorities in several jurisdictions could review our tax returns and impose additional tax, interest and penalties, which could have an impact on us and on our results of operations. We have previously participated in government programs with the Canadian federal government and Canadian provincial governments that provide investment tax credits based upon qualifying research and development expenditures. If Canadian taxation authorities successfully challenge such expenses or the correctness of such income tax credits claimed, our historical operating results could be adversely affected. As a public company, we will no longer be eligible for refundable tax credits under the Canadian federal Scientific Research and Experimental Development Program (“SR&ED”) credits. However, we are still eligible for non-refundable SR&ED credits under this program, which are eligible to reduce future income taxes payable.

Our future effective tax rates in Canada could be subject to volatility or adversely affected by a number of factors.

Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of stock-based compensation;
- costs related to intercompany restructurings;
- changes in tax laws, regulations or interpretations thereof; or
- future earnings being lower than anticipated in countries where we have has lower statutory tax rates and higher than anticipated earnings in countries where we have has higher statutory tax rates.

We may conduct activities in Canada and other jurisdictions through our subsidiaries pursuant to transfer pricing arrangements and may in the future conduct operations in other jurisdictions pursuant to similar arrangements. If two or more affiliated companies are located in different countries, the tax laws or regulations of each country generally will require that transfer prices be the same as those between unrelated companies dealing at arms' length. While we intend to operate in compliance with applicable transfer pricing laws, our transfer pricing procedures are not binding on applicable tax authorities. If tax authorities in any of these countries were to successfully challenge our transfer prices as not reflecting arm's length transactions, they could require us to adjust our transfer prices and thereby reallocate our income to reflect these revised transfer prices, which could result in a higher tax liability to us.

Our ability to use net operating loss carryforwards and other tax attributes may be limited in connection with the Business Combination or other ownership changes.

We have has incurred losses during our history. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire, if at all. As of December 31, 2020, we had U.S. federal NOL carryforwards of approximately $71.6 million.

Under the Tax Act, as modified by the CARES Act, U.S. federal NOL carryforwards generated in taxable periods beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such net operating loss carryforwards in taxable years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Act or the CARES Act.

In addition, our NOL carryforwards are subject to review and possible adjustment by the IRS, and state tax authorities. Under Sections 382 and 383 of the Code, our federal net operating loss carryforwards and other tax attributes may become subject to an annual limitation in the event of certain cumulative changes in the ownership of our stock. An "ownership change" pursuant to Section 382 of the Code generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company's stock increase their ownership (as measured by value) by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Our ability to utilize our NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including potential changes in connection with the Business Combination or other transactions. Similar rules may apply under state tax laws. We have not yet determined the amount of the cumulative change in our ownership resulting from the Business Combination or other transactions, or any resulting limitations on our ability to utilize our net operating loss carryforwards and other tax attributes. If we earn taxable income, such limitations could result in increased future income tax liability to us and our future cash flows could be adversely affected. We have recorded a valuation allowance related to our NOL carryforwards and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

Our outstanding secured and unsecured indebtedness, ability to incur additional debt and the provisions in the agreements governing our current debt, and certain other agreements, could harm our business, financial condition, results of operations and prospects.

Our debt service and similar obligations could have important consequences to us for the foreseeable future, including that our ability to obtain additional financing for capital expenditures, working capital or other general corporate purposes may be impaired and we may be or become substantially more leveraged than some of our competitors, which could place us at a relative competitive disadvantage and make us more vulnerable to changes in market conditions and governmental regulations.

We are required to maintain compliance with certain financial and other covenants under our debt and similar agreements. There are and will be operating and financial restrictions and covenants in certain of our debt and similar agreements, as well as certain other agreements to which we are or may become a party. These limit, among other things, our ability to incur certain additional debt, create certain liens or other encumbrances and sell assets. These covenants could limit our ability to engage in activities that may be in our best long-term interests. Our failure to comply with certain covenants in these agreements could result in an event of default under the various debt and similar agreements, allowing lenders to accelerate the maturity for the debt under these agreements and to foreclose upon any collateral securing the debt. Under such circumstances, we might not have sufficient funds or other resources to satisfy all of our obligations.

Risks Related to Our Operations and Industry

Construction of our plants may not be completed in the expected timeframe or in a cost-effective manner. Any delays in the construction of our plants could severely impact our business, financial condition, results of operations and prospects.

Our projected financial performance and results of operations, including our ability to achieve commercial scale production, depend on our ability to construct several commercial scale plants. While we expect the Origin 1 plant to be operational by the end of 2022, we do not expect the Origin 2 plant to be operational until 2025, and our expansion to additional commercial scale plants is not planned to commence until 2027. In particular, we have not selected a site for the Origin 2 plant or any of our other future planned plants, and may have difficulty finding a site with appropriate infrastructure and access to raw materials. With respect to these future plants, we also do not have agreements with engineering, procurement or construction firms. Consequently, we cannot predict on what terms such firms may agree to design and construct our future plants. If we are unable to construct these plants within the planned timeframes, in a cost-effective manner or at all due to a variety of factors, including, but not limited to, a failure to acquire or lease land on which to build our plants, a stoppage of construction as a result of the COVID-19 pandemic, unexpected construction problems, permitting and other regulatory issues, severe weather, labor disputes, and issues with subcontractors or vendors, including payment disputes, which we have previously experienced, our business, financial condition, results of operations and prospects could be severely impacted.

The construction and commission of any new project is dependent on a number of contingencies some of which are beyond our control. There is a risk that significant unanticipated costs or delays could arise due to, among other things, errors or omissions, unanticipated or concealed project site conditions, including subsurface conditions and changes to such conditions, unforeseen technical issues or increases in plant and equipment costs, insufficiency of water supply and other utility infrastructure, or inadequate contractual arrangements. Should these or other significant unanticipated costs arise, this could have a material adverse impact on our business, financial performance and operations. No assurance can be given that construction will be completed on time or at all, or as to whether we will have sufficient funds available to complete construction.

We plan to rely on our Origin 1 and Origin 2 plants to meet customer demand until 2027.

Our operating plan assumes that we will rely on Origin 1 and Origin 2 to meet customer demand until 2027 and that Origin 2 will supply most of our products from the time Origin 2 is expected to become operational in 2025 until 2027, when Origin 3 is expected to become operational. Adverse changes or developments affecting these facilities, and in particular Origin 2, could impair our ability to produce our products. Any shutdown or period of reduced production at these facilities, and in particular Origin 2, which may be caused by regulatory noncompliance or other issues, as well as other factors beyond our control, such as severe weather conditions, natural disaster, fire, power interruption, work stoppage, disease outbreaks or pandemics (such as COVID-19), equipment failure or delay in supply delivery, would, among other things, significantly disrupt our ability to generate revenue, execute our expansion plans, and meet our contractual obligations and customer demands. In addition, our plant equipment may be costly to replace or repair, and our equipment supply chains may be disrupted in connection with pandemics (such as COVID-19), trade wars or other factors. If any material amount of our equipment is damaged, we could be unable to predict when, if at all, we could replace or repair such equipment or find suitable alterative equipment, which could adversely affect our business, financial condition, results of operations and prospects. Performance guarantees may not be sufficient to cover damages or losses, or the guarantors under such guarantees may not have the ability to pay. Any insurance coverage we have may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all.

We may be delayed in procuring or unable to procure necessary capital equipment.

While the equipment we use to produce our products is currently widely available, we rely on outside companies to continue to manufacture the equipment necessary to produce our products. If our suppliers of capital equipment are unable or unwilling to provide us with necessary capital equipment to manufacture our products or if we experience significant delays in obtaining the necessary manufacturing equipment, our business, results of operations and financial condition could be adversely affected. In addition, the construction of our plants may require a substantial portion of certain materials and supplies relative to the overall global supply of such materials and supplies. If we are unable to secure an adequate supply of such materials and supplies on commercially reasonable terms, or at all, the construction of our plants may be delayed or terminated.

We have not produced our products in large commercial quantities.

We have no experience in producing large quantities of our products. While we have succeeded in producing small amounts of our products in our pilot plant for customer trials and testing purposes, we have not yet commenced large-scale production. There are significant technological and logistical challenges associated with producing, marketing, selling and distributing products in the specialty chemicals industry, including our products, and we may not be able to resolve all of the difficulties that may arise in a timely or cost-effective manner, or at all. While we believe that we understand the engineering and process characteristics necessary to successfully build and operate our additional planned facilities and to scale up to larger facilities, we may not be able to cost effectively manage production at a scale or quality consistent with customer demand in a timely or economical manner.

Any decline in the value of carbon credits associated with our products could harm our results of operations, cash flow and financial condition.

The value of our products may be dependent on the value of carbon credits, programs relating to low-carbon materials and products standards and other similar regulatory regimes or the implicit value of decarbonized materials. The value of these credits fluctuates based on market and regulatory forces outside of our control. There is a risk that the supply of low-carbon alternative materials and products outstrips demand, resulting in the value of carbon credits declining. Any such declines could mean that the economic benefits from our customers' efforts to de-carbonize their operations might not be realized. Any decline in the value of carbon credits associated with our products could harm our results of operations, cash flow and financial condition.

We expect to rely on a limited number of customers for a significant portion of our near-term revenue.

We currently have offtake and capacity reservation agreements with a limited number of customers, from which we expect to generate most of our revenues in the near future. The loss of one or more of our significant customers, a substantial reduction in their orders, their failure to exercise customer options, their unwillingness to extend contractual deadlines if we are unable to meet production requirements, their inability to perform under their contracts or a significant deterioration in their financial condition could harm our business, results of operations and financial condition. If we fail to perform under the terms of these agreements, the customers could seek to terminate these agreements and/or pursue damages against us, including liquidated damages in certain instances, which could harm our business.

Our offtake agreements with customers include termination, liquidated damages and/or advance repayment provisions that may be triggered if we fail to timely complete plant construction or commence our commercial operations.

Our offtake agreements with our customers allow the customers to terminate the agreements if specified construction and product delivery requirements are not satisfied. For example, under two of these agreements, if Origin 1 has not commenced commercial operation by December 31, 2021 or we have not delivered specified product volume from Origin 1 by September 30, 2022, then, in each case, the customer may terminate the agreement and any outstanding secured promissory notes resulting from advance payments made to us will become due immediately. The outstanding obligations under those promissory notes, together with accrued interest, totaled an aggregate of $10.8 million as of March 31, 2021. These agreements also require us to pay liquidated damages up to an aggregate of $0.9 million if Origin 1 has not commenced commercial operation by December 31, 2020 or we have not delivered specified product volume from Origin 1 by September 30, 2021. In September 2020, the counterparties to these agreements agreed to waive compliance with the milestones and their right to liquidated damages until June 30, 2021, in order to facilitate the negotiation of amendments to the agreements, including the milestone achievement dates. In June 2021, one of the counterparties agreed to further extend this deadline through September 30, 2021. A third offtake agreement is terminable by the customer if commercial operation or delivery of product from Origin 1 has not occurred by December 31, 2022.

Discussions to extend these milestone dates are ongoing but we cannot guarantee that the discussions will result in any extension of the milestone dates. We do not currently expect Origin 1 to be operational until 2022 or to produce product until 2023. Accordingly, if these milestone dates are not extended, we may be required to pay these liquidated damages and repay the amounts outstanding under the foregoing promissory notes and our offtake agreements may be subject to termination by our customers. If any of our offtake agreements are terminated or we are required to pay liquidated damages or repay advances under our offtake agreements, our business, results of operations and financial condition may be harmed.

Our products may not achieve market success.

We currently have a small number of binding customer commitments for commercial quantities of our products. Some prospective customers are currently evaluating and testing our products prior to making large-scale purchase decisions. The successful commercialization of our products is dependent on our customers' ability to commercialize the end-products that utilize our products, which may gain market acceptance slowly, if at all. Furthermore, the technology for our products is new, and the performance and ultimate carbon footprint of these products is uncertain. The market for carbon-negative products is nascent and subject to significant risks and uncertainties.

Market acceptance of our products will depend on numerous factors, many of which are outside of our control, including, among others:

- public acceptance of such products;
- our ability to produce products of consistent quality that offer functionality comparable or superior to existing or new products;
- our ability to produce products fit for their intended purpose;
- our ability to produce new products or customizations of existing products to match changes in public demand;
- our ability to obtain necessary regulatory approvals for our products;
- the speed at which potential customers qualify our products for use in their products;
- the pricing of our products compared to competitive and alternative products, including petroleum- based plastics;
- the strategic reaction of companies that market competitive products;
- our reliance on third parties who support or control distribution channels; and
- general market conditions, including fluctuating demand for our products.

Our industry is highly competitive, and we may lose market share to producers of products that can be substituted for our products, which may have an adverse effect on our results of operations and financial condition.

The specialty chemicals industry is highly competitive, and we face significant competition from both large established producers of fossil-based materials, recycled fossil-based materials and a variety of current and future producers of low-carbon, biodegradable, or renewable resource-based materials. Many of our current competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than us. Our competitors may be able to adapt more quickly to new or emerging technologies, changes in customer requirements and changes in laws and regulations. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share.

Our competitors may also improve their relative competitive position by successfully introducing new products or products that can be substituted for our products, improving their manufacturing processes, or expanding their capacity or manufacturing capabilities. Further, if our competitors are able to compete at advantageous cost positions, this could make it increasingly difficult for us to compete in markets for less-differentiated applications. If we are unable to keep pace with our competitors' product and manufacturing process innovations or cost position, it could harm our results of operations, financial condition and cash flows.

Our operating results may fluctuate significantly as a result of a variety of factors, many of which are outside of our control.

We are subject to, among other things, the following factors that may negatively affect our operating results:

- the announcement or introduction of new products by our competitors;
- our ability to upgrade and develop our systems and infrastructure to accommodate growth;
- our ability to attract and retain key personnel in a timely and cost-effective manner;
- our ability to attract new customer and retain existing customers;
- technical difficulties;
- the amount and timing of operating costs and capital expenditures relating to the expansion of our business, operations and infrastructure;
- our ability to identify and enter into relationships with appropriate and qualified third-party providers of necessary testing and manufacturing services;
- regulation by federal, state or local governments; and
- general economic conditions, as well as economic conditions specific to the plastics and fuels industries, and other industries related to compostable or biodegradable substitutes for
- non-biodegradable plastics, as well as changes to commodity prices to which prices in some of our contracts are indexed.

As a result of our limited operating history and the nature of the markets in which we compete, it is difficult for us to forecast our revenues or earnings accurately. We have based our anticipated future expense levels largely on our investment plans and estimates of future events, although certain of our expense levels will, to a large extent, become fixed. As a strategic response to changes in the competitive environment, we may from time to time make certain decisions concerning expenditures, pricing, service or marketing that could harm our business, results of operations and financial condition. Due to the foregoing factors, our revenues and operating results are difficult to forecast.

Our commercial success may be influenced by the price of petroleum relative to the price of non-fossil feedstocks.

Our commercial success may be influenced by the cost of our products relative to petroleum-based products. The cost of petroleum-based products is in part based on the price of petroleum, which is subject to historically fluctuating prices. Our production plans assume the use of timber and forest residues as feedstock, which historically have experienced low volatility. If the price of bio-based feedstocks increases and/or the price of petroleum decreases, our products may be less competitive relative to petroleum-based products. A material decrease in the cost of conventional petroleum-based products may require a reduction in the prices of our products for them to remain attractive in the marketplace and may negatively impact our revenues.

Increases or fluctuations in the costs of our raw materials may affect our cost structure.

The price of raw materials may be impacted by external factors, including uncertainties associated with war, terrorist attacks, weather and natural disasters, health epidemics or pandemics (such as COVID-19), civil unrest, the effects of climate change or political instability, plant or production disruptions, strikes or other labor unrest, breakdown or degradation of transportation infrastructure used in the delivery of raw materials or changes in laws or regulations in any of the countries in which we have has significant suppliers.

We currently use and plan to use local timber and forest residues as our primary raw materials. The cost of these raw materials is generally influenced by supply and demand factors, and our operating plans include assumptions that the timber and forest residues we intend to use as feedstock will be available at prices similar to historic levels with low volatility. As we continue to expand our production, we will increase our demand for timber and forest residues which may alter the anticipated stability in the costs of our raw materials and potentially drive an increase in the cost of such raw materials.

Our results of operations will be directly affected by the cost of raw materials. The cost of raw materials comprises a significant amount of our total cost of goods sold and, as a result, movements in the cost of raw materials, and in the cost of other inputs, will impact our profitability. Because a significant portion of our cost of goods sold is represented by these raw materials, our gross profit margins could be adversely affected by changes in the cost of these raw materials if we are unable to pass the increases on to our customers.

If our raw material prices experience volatility, there can be no assurance that we can continue to recover raw material costs or retain customers in the future. As a result of our pricing actions, customers may become more likely to consider competitors’ products, some of which may be available at a lower cost. Significant loss of customers could adversely impact our results of operations, financial condition and cash flows.

The failure of our raw material suppliers to perform their obligations under supply agreements, or our inability to replace or renew these agreements when they expire, could increase our cost for these materials, interrupt production or otherwise adversely affect our results of operations.

Our manufacturing processes use local timber and forest residues as our primary raw materials. However, we may be unable to secure agreements with local suppliers for the necessary amount of raw materials in certain circumstances. If we are required to obtain alternate sources for raw materials because a supplier is unwilling or unable to execute or perform under raw material supply agreements, if a supplier terminates its agreements with us, if a supplier is unable to meet increased demand as our commercial scale production expands, if we are unable to renew its contracts or if we are unable to obtain new long-term supply agreements to meet changing demand, we may not be able to obtain these raw materials in sufficient quantities, on economic terms, or in a timely manner, and we may not be able to enter into long-term supply agreements on terms as favorable to us, if at all. A lack of availability of raw materials could limit our production capabilities and prevent us from fulfilling customer orders, and therefore harm our results of operations and financial condition.

Maintenance, expansion and refurbishment of our facilities, the construction of new facilities and the development and implementation of new manufacturing processes involve significant risks.

Our facilities may require regular or periodic maintenance, upgrading, expansion, refurbishment or improvement. Any unexpected operational or mechanical failure, including failure associated with breakdowns and forced outages, could reduce our facilities' production capacity below expected levels, which would reduce our production capabilities and ultimately our revenues. Unanticipated capital expenditures associated with maintaining, upgrading, expanding, repairing, refurbishing, or improving our facilities may also reduce our profitability. Our facilities may also be subject to unanticipated damage as a result of natural disasters, terrorist attacks or other events.

If we make any major modifications to our facilities, such modifications likely would result in substantial additional capital expenditures and could prolong the time necessary to bring the facility online. We may also choose to refurbish or upgrade our facilities based on our assessment that such activity will provide adequate financial returns. However, such activities require time for development and capital expenditures before commencement of commercial operations, and key assumptions underpinning a decision to make such an investment may prove incorrect, including assumptions regarding construction costs and timing, which could harm our business, financial condition, results of operations and cash flows.

The construction of new manufacturing facilities entails a number of risks and assumptions, including the ability to begin production within the cost and timeframe estimated and to attract a sufficient number of skilled workers to meet the needs of the new facility. Additionally, our assessment of the projected benefits associated with the construction of new manufacturing facilities is subject to a number of estimates and assumptions, which in turn are subject to significant economic, competitive and other uncertainties that are beyond our control. If we experience delays or increased costs, our estimates and assumptions are incorrect, or other unforeseen events occur, our business, ability to supply customers, financial condition, results of operations and cash flows could be adversely impacted.

Finally, we may not be successful or efficient in developing or implementing new production processes. Innovation in production processes involves significant expense and carries inherent risks, including difficulties in designing and developing new process technologies, development and production timing delays, lower than anticipated manufacturing yields, and product defects. Disruptions in the production process can also result from errors, defects in materials, delays in obtaining or revising operating permits and licenses, returns of product from customers, interruption in our supply of materials or resources, and disruptions at our facilities due to accidents, maintenance issues, or unsafe working conditions, all of which could affect the timing of production ramps and yields. Production issues can lead to increased costs and may affect our ability to meet product demand, which could adversely impact our business and results from operations.

We may not be successful in finding future strategic partners for continuing development of additional offtake and feedstock opportunities or tolling and downstream conversion of our products.

We may seek to develop additional strategic partnerships to increase feedstock supply and offtake amounts due to manufacturing constraints or capital costs required to develop our products. We may not be successful in our efforts to establish such strategic partnerships or other alternative arrangements for our products or technology because our research and development pipeline may be insufficient, our products may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our products as having the requisite potential to demonstrate commercial success.

If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail the development of our products, delay commercialization, reduce the scope of any sales or marketing activities or increase expenditures and undertake development or commercialization activities at our own expense. If we elect to fund development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to develop additional products and our business, financial condition, results of operations and prospects may be materially and adversely affected.

We may rely heavily on future collaborative and supply chain partners.

We have has entered into, and may enter into, strategic partnerships to develop and commercialize our current and future research and development programs with other companies to accomplish one or more of the following:

- obtain capital, equipment and facilities;
- obtain funding for research and development programs, product development programs and commercialization activities;
- obtain expertise in relevant markets;
- obtain access to raw materials;
- obtain sales and marketing services or support;
- obtain conversion services and other downstream supply chain support; and/or
- obtain access to intellectual property and ensure freedom to operate.

We may not be successful in establishing or maintaining suitable partnerships, and we may not be able to negotiate collaboration agreements having terms satisfactory to us, or at all. Failure to make or maintain these arrangements or a delay or failure in a collaborative partner’s performance under any such arrangements could harm our business and financial condition.

We may become subject to product liability claims that may not be covered by insurance and could require us to pay substantial sums.

We are subject to an inherent risk of, and adverse publicity associated with, product liability and other liability claims, whether or not such claims are valid. In addition, our customers are subject to product liability claims, and could seek contribution from us. A successful product liability claim or series of claims against us could adversely impact the specialty chemicals industry, our reputation or our financial condition or results of operations. Product liability insurance may not be available to us on commercially acceptable terms, or at all. Even if such insurance is available, product liability or other claims may exceed our insurance coverage limits. A successful product liability claim that exceeds our insurance coverage limits, for which we are not otherwise indemnified, could require us to pay substantial sums and could harm our business, financial condition or results of operations.

Climate change may impact the availability of our facilities and, in addition, we may incur substantial costs to comply with climate change legislation and related regulatory initiatives.

Changing weather patterns and the increase in frequency of severe storms such as hurricanes and tornadoes could cause disruptions or the complete loss of our facilities or delay the construction of future facilities. In addition, climate change concerns, and changes in the regulation of such concerns, including greenhouse gas emissions, could also subject us to additional costs and restrictions, including increased energy and raw materials costs which could negatively impact our financial condition and results of operations. Climate change may also negatively impact the availability of our feedstock. The effects of climate change can not only adversely impact our operations, but also that of its suppliers and customers, and can lead to increased regulations and changes in consumer preferences, which could adversely affect our business, results of operations and financial condition.

Risks Related to Government Regulation

Compliance with extensive environmental, health and safety laws could require material expenditures, changes in our operations or site remediation.

We use hazardous materials in our production process, and our operations also produce hazardous waste. The manufacture, transportation and sale of our products can present potentially significant health and safety concerns and are also under increased public and governmental scrutiny. Our products are also used in a variety of applications that have specific regulatory requirements such as those relating to products that have contact with food or are used for medical applications.

Accordingly, our operations are subject to environmental, health and safety laws and regulations at the international, national, state and local level in multiple jurisdictions. These laws and regulations govern, among other things, air emissions, wastewater discharges, solid and hazardous waste management and disposal, occupational health and safety, including dust and noise control, site remediation programs and chemical use and management. Many of these laws and regulations have become more stringent over time and the costs of compliance with these requirements may increase, including costs associated with any necessary capital investments. In addition, our plants will require operating permits that are subject to renewal and, in some circumstances, revocation. The necessary permits may not be issued or continue in effect, and renewals of any issued permits may contain significant new requirements or restrictions. The nature of the specialty chemicals industry exposes us to risks of liability due to the use, production, management, storage, transportation and sale of materials that are heavily regulated or hazardous and can cause contamination or personal injury or damage if released into the environment.

Compliance with environmental laws and regulations generally increases the costs of transportation and storage of raw materials and finished products, as well as the costs of storage and disposal of wastes. We may incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations for violations arising under environmental laws, regulations or permit requirements.

In addition, the market for bioplastics is heavily influenced by applicable federal, state and local government laws, regulations and policies as well as public perception. Changes in these laws, regulations and policies or how these laws, regulations and policies are implemented and enforced could cause the demand for bioplastics to decline and deter investment in the research and development of bioplastics. Concerns associated with bioplastics, including land usage, national security interests, deforestation, food crop usage and other environmental concerns, continue to receive legislative, industry and public attention. This attention could result in future legislation, regulation and/or administrative action that could adversely affect our business.

Furthermore, various petrochemical products, including plastics, have faced increased public scrutiny due to negative coverage of plastic waste in the environment, which has resulted in local, state, federal and foreign governments proposing and in some cases approving, restrictions or bans on the manufacture, consumption and disposal of certain petrochemical products. Although our products are intended to replace petrochemical products, increased regulation on the use of such products or other products in the specialty chemicals industry, whatever their scope or form, could increase our costs of production, impact overall consumption of our products or result in misdirected negative publicity. Any inability to address these requirements and any regulatory or policy changes could harm our business, financial condition and results of operations.

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws and regulations. We could face criminal liability and other serious consequences for violations, which would harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act and possibly other anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors and other collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We can also be held liable for the corrupt or other illegal activities of our employees, agents, contractors and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Our operating plan may require us to source feedstock and supplies internationally, and foreign currency exchange rate fluctuations and changes to international trade agreements, tariffs, import and excise duties, taxes or other governmental rules and regulations could adversely affect our business, financial condition, results of operations and prospects.

Our expansion model is global and we will need to source feedstock from suppliers around the world. In particular, our manufacturing process uses local timber and forest residues as our primary raw materials, which must be sourced locally. For the Origin 1 plant, this means we will need to source feedstock from Canadian suppliers. The U.S. federal government or other governmental bodies may propose changes to international trade agreements, tariffs, taxes and other government rules and regulations. If foreign currency exchange rates fluctuate or any restrictions or significant increases in costs or tariffs are imposed related to feedstock sourced to our plants as a result of amendments to existing trade agreements or otherwise, this may increase our supply and shipping costs, resulting in potential decreased margins. We may expand our operations to countries with unstable governments that are subject to instability, corruption, changes in rules and regulations and other potential uncertainties that could harm our business, financial condition, results of operations and prospects. The extent to which our margins could decrease in response to any future tariffs is uncertain. We continue to evaluate the impact of trade agreements, as well as foreign currency exchange rate fluctuations and other recent changes in foreign trade policy on our supply chain, costs, sales and profitability. In addition, COVID-19 has resulted in increased travel restrictions and the extended shutdown of certain businesses throughout the world. The impact of COVID-19 on our business is uncertain at this time and will depend on future developments; however, prolonged closures in Canada, Europe, Asia and elsewhere may disrupt the operations of certain feedstock suppliers, which could, in turn, negatively impact our business, financial condition, results of operations and prospects.

Risks Related to Our Intellectual Property

Our business relies on proprietary information and other intellectual property, and our failure to protect our intellectual property rights could harm our competitive advantages with respect to the use, manufacturing, sale or other commercialization of our processes, technologies and products, which may have an adverse effect on our results of operations and financial condition.

We intend to make significant capital investments into the research and development of proprietary information and other intellectual property as we develop, improve and scale our processes, technologies and products, and failure to fund and make these investments, or underperformance of the technology funded by these investments, could severely impact our business, financial condition, results of operations and prospects.

If we fail to adequately protect our intellectual property rights, such failure could result in the reduction or loss of our competitive advantage. We may be unable to prevent third parties from using our proprietary information and other intellectual property without our authorization or from independently developing proprietary information and other intellectual property that is similar to ours, particularly in those countries where the laws do not protect our proprietary rights to the same degree as in the U.S or those countries where we do not have intellectual property rights protection. The use of our proprietary information and other intellectual property by others could reduce or eliminate competitive advantages that we have developed, potentially causing us to lose sales or actual or potential customers, or otherwise harm our business. If it becomes necessary for us to litigate to protect these rights, any proceedings could be burdensome and costly, could result in counterclaims challenging our intellectual property (including validity or enforceability) or accusing us of infringement, and we may not prevail.

Our patent applications and issued patents may be practiced by third parties without our knowledge. Our competitors may also attempt to design around our patents or copy or otherwise obtain and use our proprietary information and other intellectual property. Moreover, our competitors may already hold or have applied for patents in the U.S. or abroad that, if enforced, could possibly prevail over our patent rights or otherwise limit our ability to manufacture, sell or otherwise commercialize one or more of our products in the U.S. or abroad. With respect to our pending patent applications, we may not be successful in securing issued patents, or the claims of such patents may be narrowed, any of which may limit our ability to protect inventions that these applications were intended to cover, which could harm our ability to prevent others from exploiting our technologies and commercializing products similar to our products. In addition, the expiration of a patent can result in increased competition with consequent erosion of profit margins.

The applicable governmental authorities may not approve our pending service mark and trademark applications. A failure to obtain trademark registrations in the U.S. and in other countries could limit our ability to obtain and retain our trademarks in those jurisdictions. Moreover, third parties may seek to oppose our applications or otherwise challenge the resulting registrations. In the event that our trademarks are not approved or are successfully challenged by third parties, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote significant resources to rebranding and advertising and marketing new brands.

The failure of our patents, trademarks, trade secrets, or confidentiality agreements to protect our proprietary information and other intellectual property, including our processes, apparatuses, technology, trade secrets, trade names and proprietary manufacturing expertise, methods and compounds, could have a material adverse effect on our business and results of operations.

Some of our intellectual property has been or will be discovered, conceived or developed through research funded by the Canadian government and thus may be subject to federal regulations providing for certain rights for the Canadian government or imposing certain obligations on us, such as limitations on exploiting such intellectual property outside of Canada. Compliance with such regulations may limit our exclusive rights and ability to commercialize our products and technology outside of Canada.

We may face patent infringement and other intellectual property claims that could be costly to defend, result in injunctions and significant damage awards or other costs (including indemnification of third parties or costly licensing arrangements, if licenses are available at all) and limit our ability to use certain key technologies in the future or require development of non-infringing products or technologies, which may cause us to incur significant unexpected costs, prevent us from commercializing our products and otherwise harm our business.

The various bioindustrial markets in which we plan to operate are subject to frequent and extensive litigation regarding patents, trade secrets and other intellectual property rights. Many of our competitors have a substantial amount of intellectual property. We cannot guarantee that our processes and products do not and will not infringe issued patents (whether present or future) or other intellectual property rights belonging to others.

From time to time, we oppose third-party patents that we consider overbroad or otherwise invalid in order to maintain the necessary freedom to operate fully in our various business lines without the risk of being sued for patent infringement. If, however, the oppositions are unsuccessful, we could be liable for infringement or have to take other remedial or curative actions to continue our manufacturing and sales activities with respect to one or more products.

We may also be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement or misappropriation of the patents, trademarks, trade secrets and other intellectual property rights of third parties by us or our licensees in connection with their use of our products. Intellectual property litigation is expensive and time-consuming, regardless of the merits of any claim, and could divert our management's attention from operating our business.

If we were to discover that our processes, technologies or products infringe or misappropriate the valid intellectual property rights of others, we might need to obtain licenses from these parties or substantially re-engineer our processes, technologies or products in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer our processes, technologies or products successfully. Moreover, if we or our licensees are sued for infringement or misappropriation and lose, we could be required to pay substantial damages, indemnify our licensees and/or be enjoined from using or selling the infringing processes, technologies or products. If we incur significant costs to litigate infringement or misappropriation claims or to obtain licenses, or if our inability to obtain required licenses prevents us from using or selling our processes, technologies or products, it could have a material adverse effect on our business and results of operations.

We rely on trade secrets to protect our technology, and our failure to maintain trade secret protection could limit our ability to compete.

We rely on trade secrets to protect some of our technology and proprietary information, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets can be difficult to protect. The misappropriation or other compromise of our trade secrets may lead to a reduction or loss of our competitive advantages resulting from such trade secrets. Further, litigating a claim that a third party had misappropriated our trade secrets would be expensive and time consuming, and the outcome would be unpredictable. Moreover, if our competitors independently develop similar knowledge, methods and know-how, it will be difficult for us to enforce our rights and our business could be harmed.

Our confidentiality agreements could be breached or may not provide meaningful protection for our trade secrets or proprietary manufacturing expertise. Adequate remedies may not be available in the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Violations by others of our confidentiality agreements and the loss of employees who have specialized knowledge and expertise could harm our competitive position resulting from the exclusive nature of such knowledge and expertise and cause our sales and operating results to decline as a result of increased competition. In addition, others may obtain knowledge of our trade secrets through independent development or other access by legal means.

Other Risks Related to Our Business

Our management has limited experience in operating a public company.

Our executive officers have limited experience in the management of a publicly traded company subject to significant regulatory oversight and reporting obligations under federal securities laws. Our management team may not successfully or effectively manage our transition to a public company following the Business Combination. Their limited experience in dealing with the increasingly complex laws pertaining to public companies could be a significant disadvantage in that it is likely that an increasing amount of their time may be devoted to these activities which will result in less time being devoted to our management and growth. We may not have adequate personnel with the appropriate level of knowledge, experience and training in the accounting policies, practices or internal controls over financial reporting required of public companies in the United States. It is possible that will be required to expand its employee base and hire additional employees to support our operations as a public company, which will increase its operating costs in future periods.

We are dependent on management and key personnel, and our business would suffer if we fail to retain our key personnel and attract additional highly skilled employees.

Our success depends on the specialized skills of our management team and key operating personnel. This may present particular challenges as we operate in a highly specialized industry sector, which may make replacement of our management team and key operating personnel difficult. A loss of our managers or key employees, or their failure to satisfactorily perform their responsibilities, could have an adverse effect on our business, financial condition, results of operations and prospects.

Our future success will depend on our ability to identify, hire, develop, motivate and retain highly qualified personnel for all areas of our organization, particularly research and development, recycling technology, operations and sales. Trained and experienced personnel are in high demand and may be in short supply. Many of the companies that we compete with for experienced employees have greater resources than us and may be able to offer more attractive terms of employment. In addition, we invest significant time and expense in training employees, which increases their value to competitors that may seek to recruit them. We may not be able to attract, develop and maintain the skilled workforce necessary to operate our business, and labor expenses may increase as a result of a shortage in the supply of qualified personnel, which will negatively impact our business, financial condition, results of operations and prospects.

If we experience a significant disruption in our information technology systems, including security breaches, or if we fail to implement new systems and software successfully, our business operations and financial condition could be adversely affected.

We depend on information technology systems to, among other functions, control our manufacturing processes, process orders and invoices, collect and make payments, interact with customers and suppliers, manage inventory and otherwise conduct our business. We also depend on these systems to respond to customer inquiries, contribute to our overall internal control processes, maintain records of our property, plant and equipment and record and pay amounts due to vendors and other creditors. The failure of our information technology systems to perform as we anticipate could disrupt our business and could result in transaction errors, processing inefficiencies and the loss of sales and customers. As we implement planned upgrades or changes to systems, we may also experience interruptions in service, loss of data or reduced functionality and other unforeseen material issues which could adversely impact our ability to provide quotes, take customer orders and otherwise run our business in a timely manner. In addition, if our new systems fail to provide accurate and increased visibility into pricing and cost structures, it may be difficult to improve or maximize our profit margins. As a result, our results of operations could be adversely affected.

In addition, cyber-attacks or security breaches could compromise confidential, business critical information, cause a disruption in our operations or harm our reputation. Our information technology systems are subject to potential disruptions, including significant network or power outages, cyberattacks, computer viruses, other malicious codes and/or unauthorized access attempts, any of which, if successful, could result in data leaks or otherwise compromise our confidential or proprietary information and disrupt our operations. Despite our efforts to protect sensitive information and comply with and implement data security measures, there can be no assurance that any controls and procedures that we have in place will be sufficient to protect us. Further, as cyber threats are continually evolving, our controls and procedures may become inadequate and we may be required to devote additional resources to modify or enhance our systems in the future. We may also be required to expend resources to remediate cyber-related incidents or to enhance and strengthen our cyber security. Any such disruptions to our information technology systems, breaches or compromises of data, and/or misappropriation of information could result in violation of privacy and other laws, litigation, fines, negative publicity, lost sales or business delays, any of which could have a material adverse effect on our business, financial condition or results of operations.

Risks Related to Ownership of Our Shares

Our Certificate of Incorporation provides, subject to limited exceptions, that the Delaware Court of Chancery is the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a chosen judicial forum for disputes with us or our directors, officers, employees or stockholders.

Our Certificate of Incorporation requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought in the Delaware Court of Chancery or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our Certificate of Incorporation. In addition, our Certificate of Incorporation provides that the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our Certificate of Incorporation and Bylaws contain provisions that could delay or prevent a change in control of us. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- initially providing for a classified board of directors with staggered, three-year terms;
- authorizing our board of directors to issue Preferred Stock with voting or other rights or preferences that could discourage a takeover attempt or delay changes in control;
- prohibiting cumulative voting in the election of directors;
- providing that vacancies on our board of directors may generally be filled only by a majority of directors then in office, even though less than a quorum;
- prohibiting the adoption, amendment or repeal of the Bylaws or the repeal of the provisions of our Certificate of Incorporation regarding the election and removal of directors without the required approval of at least two-thirds of the shares entitled to vote at an election of directors;
- prohibiting stockholder action by written consent;
- limiting the persons who may call special meetings of stockholders; and
- requiring advance notification of stockholder nominations and proposals.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board, which is responsible for appointing the members of our management. In addition, the provisions of Section 203 of the DGCL us. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time without the consent of our Board. These and other provisions in our Certificate of Incorporation and our Bylaws under Delaware law could discourage potential takeover attempts, reduce the price investors might be willing to pay in the future for shares of our Common Stock and result in the market price of our Common Stock being lower than it would be without these provisions.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our Certificate of Incorporation and Bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the DGCL, the Bylaws and its indemnification agreements that we entered into with our directors and officers provide that:

- we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;

- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we will be required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification;
- we will not be obligated pursuant to our Bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our Board or brought to enforce a right to indemnification;
- the rights conferred in the Bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and
- we may not retroactively amend our Bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

We do not intend to pay dividends for the foreseeable future.

We have has never declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends on our capital stock will be at the discretion of our Board. In addition, our loan agreements contain restrictions on our ability to pay dividends.

The market price and trading volume of our Common Stock may be volatile and could decline significantly.

The stock markets, including Nasdaq on which we have to listed the shares of our Common Stock under the symbol "ORGN," have from time to time experienced significant price and volume fluctuations. Even if an active, liquid and orderly trading market is sustained for our Common Stock, the market price of our Common Stock may be volatile and could decline significantly. In addition, the trading volume in our Common Stock may fluctuate and cause significant price variations to occur. If the market price of our Common Stock declines significantly, you may be unable to resell your shares at or above the market price of our Common Stock at which your purchased our Common Stock. We cannot assure you that the market price of Common Stock will not fluctuate widely or decline significantly in the future in response to a number of factors, including, among others, the following:

- the realization of any of the risk factors presented in this Report;
- actual or anticipated differences in our estimates, or in the estimates of analysts, for our revenues, results of operations, level of indebtedness, liquidity or financial condition;
- additions and departures of key personnel;
- failure to comply with the requirements of Nasdaq;
- failure to comply with the Sarbanes-Oxley Act or other laws or regulations;

- future issuances, sales, resales or repurchases or anticipated issuances, sales, resales or repurchases, of our securities;
- publication of research reports about us;
- the performance and market valuations of other similar companies;
- commencement of, or involvement in, litigation involving us;
- broad disruptions in the financial markets, including sudden disruptions in the credit markets;
- speculation in the press or investment community;
- actual, potential or perceived control, accounting or reporting problems;
- changes in accounting principles, policies and guidelines; and
- other events or factors, including those resulting from infectious diseases, health epidemics and pandemics (including the ongoing COVID-19 public health emergency), natural disasters, war, acts of terrorism or responses to these events.

In the past, securities class-action litigation has often been instituted against companies following periods of volatility in the market price of their shares. This type of litigation could result in substantial costs and divert our management's attention and resources, which could have a material adverse effect on us.

Our quarterly operating results may fluctuate significantly and could fall below the expectations of securities analysts and investors due to seasonality and other factors, some of which are beyond our control, resulting in a decline in our stock price.

Our quarterly operating results may fluctuate significantly because of several factors, including:

- labor availability and costs for hourly and management personnel;
- profitability of our products;
- changes in interest rates;
- impairment of long-lived assets;
- macroeconomic conditions, both nationally and locally;
- negative publicity relating to products we serve;
- changes in consumer preferences and competitive conditions;
- expansion to new markets; and
- fluctuations in commodity prices.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our Common Stock adversely, then the price and trading volume of our Common Stock could decline.

The trading market for our Common Stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market, or our competitors. Securities and industry analysts do not currently, and may never, publish research on us. If no securities or industry analysts commence coverage of us, our stock price and trading volume would likely be negatively impacted. If any of the analysts who may cover us change their recommendation regarding our Common Stock adversely, or provide more favorable relative recommendations about our competitors, the price of our Common Stock would likely decline. If any analyst who may cover us were to cease coverage of the us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

Future issuances of debt securities and equity securities may adversely affect us, including the market price of the our Common Stock and may be dilutive to existing stockholders.

In the future, we may incur debt or issue equity-ranking senior to our Common Stock. Those securities will generally have priority upon liquidation. Such securities also may be governed by an indenture or other instrument containing covenants restricting its operating flexibility. Additionally, any convertible or exchangeable securities that we issue in the future may have rights, preferences and privileges more favorable than those of our Common Stock. Because our decision to issue debt or equity in the future will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing, nature or success of our future capital raising efforts. As a result, future capital raising efforts may reduce the market price of our Common Stock and be dilutive to existing stockholders.

There can be no assurance that we will be able to comply with the continued listing standards of Nasdaq.

Our Common Stock and Public Warrants are currently listed on Nasdaq. If Nasdaq delists our securities from trading on its exchange for failure to meet the listing standards, we and our stockholders could face significant material adverse consequences including:

- a limited availability of market quotations for our securities;
- reduced liquidity for our securities;
- a determination that our Common Stock is a “penny stock” which will require brokers trading in our Common Stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our securities; or
- a decreased ability to issue additional securities or obtain additional financing in the future.

The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as “covered securities.” Because Common Stock and Public Warrants are listed on Nasdaq, they are covered securities. Although the states are preempted from regulating the sale of our securities, the federal statute does allow the states to investigate companies if there is a suspicion of fraud, and, if there is a finding of fraudulent activity, then the states can regulate or bar the sale of covered securities in a particular case. While we are not aware of a state, other than the State of Idaho, having used these powers to prohibit or restrict the sale of securities issued by blank check companies, certain state securities regulators view blank check companies unfavorably and might use these powers, or threaten to use these powers, to hinder the sale of securities of blank check companies in their states. Further, if we were no longer listed on Nasdaq, our securities would not be covered securities and we would be subject to regulation in each state in which we offer our securities.

Our failure to meet the continued listing requirements of Nasdaq could result in a delisting of our securities.

If we fail to satisfy the continued listing requirements of Nasdaq such as the corporate governance requirements or the minimum share price requirement, Nasdaq may take steps to delist our securities. Such a delisting would likely have a negative effect on the price of the securities and would impair your ability to sell or purchase the securities when you wish to do so. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow our securities to become listed again, stabilize the market price or improve the liquidity of our securities, prevent our securities from dropping below the Nasdaq minimum share price requirement or prevent future non-compliance with Nasdaq's listing requirements. Additionally, if our securities are not listed on, or become delisted from, Nasdaq for any reason, and are quoted on the OTC Bulletin Board, an inter-dealer automated quotation system for equity securities that is not a national securities exchange, the liquidity and price of our securities may be more limited than if we were quoted or listed on Nasdaq or another national securities exchange. You may be unable to sell your securities unless a market can be established or sustained.

We qualify as an emerging growth company as well as a smaller reporting company within the meaning of the Securities Act, and if we take advantage of certain exemptions from disclosure requirements available to emerging growth companies or smaller reporting companies, this could make our securities less attractive to investors and may make it more difficult to compare our performance with other public companies.

We qualify as an "emerging growth company" within the meaning of the Securities Act, as modified by the JOBS Act, and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies for as long as we continue to be an emerging growth company, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, our stockholders may not have access to certain information they may deem important. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of our Common Stock that is held by non-affiliates equals or exceeds $700 million as of the end of that year's second fiscal quarter, (ii) the last day of the fiscal year in which we have total annual gross revenue of $1.07 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we have issued more than $1 billion in non-convertible debt in the prior three-year period or (iv) December 31, 2026. Investors may find our securities less attractive because we will rely on these exemptions. If some investors find our securities less attractive as a result of our reliance on these exemptions, the trading prices of our securities may be lower than they otherwise would be, there may be a less active trading market for our securities and the trading prices of our securities may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have has elected not to opt out of such extended transition period and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth

companies. This may make comparison of our financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accountant standards used.

Additionally, we qualify as a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our Common Stock held by non-affiliates exceeds $250 million as of the end of that year's second fiscal quarter, or (ii) our annual revenues exceeded $100 million during such completed fiscal year and the market value of our Common Stock held by non-affiliates equals or exceeds $700 million as of the end of that year's second fiscal quarter. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of our financial statements with other public companies difficult or impossible.

We will no longer qualify as an emerging growth company or a smaller reporting company for Securities Act or Exchange Act reporting after December 31, 2021

A significant portion of our total outstanding shares of Common Stock are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of Common Stock to drop significantly, even if our business is doing well.

Shares of our Common Stock that are currently restricted from immediate resale may be sold into the market in the near future. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of Common Stock. We are unable to predict the effect that sales may have on the prevailing market price of Common Stock and Public Warrants.

To the extent our Warrants are exercised, additional shares of Common Stock will be issued, which will result in dilution to the holders of Common Stock and increase the number of shares eligible for resale in the public market. Sales, or the potential sales, of substantial numbers of shares in the public market by the selling securityholders, subject to certain restrictions on transfer until the termination of applicable lock-up periods, could increase the volatility of the market price of Common Stock or adversely affect the market price of Common Stock.

There is no guarantee that the Warrants will be in the money at the time they become exercisable, and they may expire worthless.

The exercise price for our Warrants is $11.50 per share of Common Stock. There is no guarantee that the Warrants will be in the money following the time they become exercisable and prior to their expiration, and as such, the Warrants may expire worthless. Our Warrants become exercisable on July 25, 2021.

We may amend the terms of the Warrants in a manner that may be adverse to holders with the approval by the holders of at least 50% of the then-outstanding Public Warrants. As a result, the exercise price of your Warrants could be increased, the exercise period could be shortened and the number of shares of our Common Stock purchasable upon exercise of a Warrant could be decreased, all without your approval.

Our Warrants are issued in registered form under the Warrant Agreement between the warrant agent and us. The Warrant Agreement provides that the terms of the Warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 50% of the then-outstanding Public Warrants to make any change that adversely affects the interests of the registered holders of Public Warrants. Accordingly, we may amend the terms of the Public Warrants in a manner adverse to a holder if holders of at least 50% of the then-outstanding Public Warrants approve of such amendment. Although our ability to amend the terms of the Public Warrants with the consent of at least 50% of the then- outstanding Public Warrants is unlimited, examples of such amendments could be amendments to, among other things, increase the exercise price of the Warrants, convert the Warrants into cash or stock (at a ratio different than initially provided), shorten the exercise period or decrease the number of shares of our Common Stock purchasable upon exercise of a Warrant.

We may redeem unexpired Warrants prior to their exercise at a time that is disadvantageous to warrantholders, thereby making such Warrants worthless.

We have the ability to redeem outstanding Warrants at any time after they become exercisable and prior to their expiration, at a price of $0.01 per Warrant, provided that the last reported sales price of our Common Stock equals or exceeds $18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30 trading-day period ending on the third trading day prior to the date on which we give proper notice of such redemption and provided certain other conditions are met. If and when the Warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. Redemption of the outstanding Warrants could force you (a) to exercise your Warrants and pay the exercise price therefor at a time when it may be disadvantageous for you to do so, (b) to sell your Warrants at the then-current market price when you might otherwise wish to hold your Warrants or (c) to accept the nominal redemption price which, at the time the outstanding Warrants are called for redemption, is likely to be substantially less than the market value of your Warrants.

In addition, we may redeem your Warrants after they become exercisable for a number of shares of Common Stock determined based on the redemption date and the fair market value of our Common Stock. Any such redemption may have similar consequences to a cash redemption described above. In addition, such redemption may occur at a time when the Warrants are "out-of-the-money," in which case, you would lose any potential embedded value from a subsequent increase in the value of our Common Stock had your Warrants remained outstanding.

We may issue additional shares of Common Stock or other equity securities without your approval, which would dilute your ownership interests and may depress the market price of the Common Stock.

We have Warrants outstanding to purchase an aggregate of 35,476,667 shares of Common Stock. Pursuant to the Merger Agreement, we may issue up to 25,000,000 shares of our Common Stock as Earnout Shares. In addition, pursuant to the 2021 Plan and the Employee Stock Purchase Plan ("ESPP"), we may issue an aggregate of up to 20,313,819 shares of Common Stock, which amount may be subject to increase from time to time. We may also issue additional shares of Common Stock or other equity securities of equal or senior rank in the future in connection with, among other things, future acquisitions or repayment of outstanding indebtedness, without stockholder approval, in a number of circumstances. The issuance of additional shares or other equity securities of equal or senior rank would have the following effects:

- existing stockholders' proportionate ownership interest in us will decrease;
- the amount of cash available per share, including for payment of dividends in the future, may decrease;
- the relative voting strength of each previously outstanding Common Stock may be diminished; and
- the market price of the Common Stock may decline.

Item 2.Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3.Defaults upon senior securities

None.

Item 4.Mine safety disclosures

Not applicable.

Item 5.Other Information

None.

Item 6.Exhibits

Exhibit No.	Description	Form	Incorporated by Reference		
			File No.	Exhibit	Filing Date
2.1^	Agreement and Plan of Merger and Reorganization, dated February 16, 2021.	S-4/A	333-254012	2.1	May 25, 2021
2.2	Letter Agreement, dated March 5, 2021.	S-4/A	333-254012	2.2	May 25, 2021
3.1	Amended and Restated Certificate of Incorporation of the Company.	8-K	001-39378	3.3	July 1, 2021
3.2	Bylaws of the Company.	8-K	001-39378	3.2	June 29, 2021
4.1	Specimen Common Stock Certificate of the Company.	S-4/A	333-254012	4.4	May 25, 2021
4.2	Specimen Warrant Certificate of the Company.	S-1/A	333-239421	4.3	July 2, 2020
4.3	Warrant Agreement between the Company and Continental Stock Transfer & Trust Company, dated July 13, 2020.	8-K	001-39378	4.1	July 16, 2020
10.1	Form of Subscription Agreement.	8-K	001-39378	10.1	February 17, 2021
10.2	Form of Backstop Agreement.	8-K	001-39378	10.1	June 15, 2021
10.3	Form of Lock-Up Agreement.	S-4/A	333-254012	10.26	February 17, 2021
10.4	Form of Additional Subscription Agreement.	8-K	001-39378	10.1	June 29, 2021
10.5	Investor Rights Agreement, by and between the Company and certain stockholders, dated June 25, 2021.	8-K	001-39378	10.5	July 1, 2021
10.6#	Form of Indemnification Agreement.	8-K	001-39378	10.6	July 1, 2021
10.7#	Non-Employee Director Compensation Policy.	8-K	001-39378	10.7	July 1, 2021
10.8#	Origin Materials 2021 Equity Incentive Plan.	8-K	001-39378	10.12	July 1, 2021

10.9#	Form of Stock Option Grant Notice, Stock Option Agreement, Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the 2021 Equity Incentive Plan.	S-1	333-257931	10.13	July 15, 2021
10.10#	Origin Materials 2021 Employee Stock Purchase Plan.	8-K	001-39378	10.14	July 1, 2021
10.11	Form of Sponsor Letter Agreement.	S-4/A	333-254012	10.16	May 25, 2021
10.12	Form of Company Stockholder Support Agreement.	S-4/A	333-254012	10.17	May 25, 2021
31.1*	Certification of Co-Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.				
31.2*	Certification of Co-Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.				
31.3*	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.				
32.1*+	Certification of Co-Principal Executive Officers and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS*	XBRL Instance Document				
101.SCH*	XBRL Taxonomy Extension Schema Document				
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF*	XBRL Taxonomy Extension Definitions Linkbase Document				
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE*	XBRL Taxonomy Extension Label Linkbase Document				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

* Filed herewith.

^ Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company agrees to furnish supplementally a copy of any omitted schedule or exhibit to the SEC upon request.

\# Indicates a management or compensatory plan

\+ Furnished herewith and not deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

	ORIGIN MATERIALS, INC.
Date: August 16, 2021	By: /s/ John Bissell John Bissell Co-Chief Executive Officer
Date: August 16, 2021	By: /s/ Rich Riley Rich Riley Co-Chief Executive Officer
Date: August 16, 2021	By: /s/ Nate Whaley Nate Whaley Chief Financial Officer

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Exhibit 31.1

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, John Bissell, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Origin Materials, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: August 16, 2021

By: /s/ John Bissell
John Bissell
Co-Chief Executive Officer
(Co-Principal Executive Officer)

Exhibit 31.2

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Rich Riley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Origin Materials, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2021

By: /s/ Rich Riley
Rich Riley
Co-Chief Executive Officer
(Co-Principal Executive Officer)

Exhibit 31.3

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Nate Whaley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Origin Materials, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2021

By: /s/ Nate Whaley
Nate Whaley
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), John Bissell, Co-Chief Executive Officer of Origin Materials, Inc. (the "Company"), and Nate Whaley, Chief Financial Officer of the Company, each hereby certifies, that, to the best of their knowledge:

1. The Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2021, to which this Certification is attached as Exhibit 32.1 (the "Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: August 16, 2021

By: /s/ John Bissell
John Bissell
Co-Chief Executive Officer
(Co-Principal Executive Officer)

By: /s/ Rich Riley
Rich Riley
Co-Chief Executive Officer
(Co-Principal Executive Officer)

By: /s/ Nate Whaley
Nate Whaley
Chief Financial Officer
(Principal Financial Officer)

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Origin Materials, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.