INTERMOLECULAR INC
Form 10-K
March 10, 2014
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2013

OR

o 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: 001-35348

Intermolecular, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)	20-1616267 (I.R.S. Employer Identification No.)
3011 N. First Street San Jose, California (Address of Principal Executive Offices)	95134 (Zip Code)
(408) 582-5700 (Registrant's Telephone Number, Including Area Code)	

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.001 par value	The NASDAQ Global Select Market

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

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

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

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 ý No o

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

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

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

Large accelerated filer o	Accelerated filer ý	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

As of June 28, 2013 (the last business day of the registrant's most recently completed second quarter), the aggregate market value of the registrant's common stock, par value $0.001, held by non-affiliates of the registrant was $164.8 million based upon the closing price reported for such date by the NASDAQ. Shares of the registrant's common stock held by executive officers and directors of the registrant and by each person who owned 10% or more of the outstanding common stock have been excluded because such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 3, 2014, the number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 46,803,328.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Definitive Proxy Statement to be filed with the Commission pursuant to Regulation 14A in connection with the registrant's 2014 Annual Meeting of Stockholders, to be filed subsequent to the date hereof, are incorporated by reference into Part III of this Report. Such Definitive Proxy Statement will be filed with the Securities and Exchange Commission not later than 120 days after the conclusion of the registrant's fiscal year ended December 31, 2013. Except with respect to information specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed as part of this Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements and the related notes that appear elsewhere in this Annual Report on Form 10-K. This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, particularly in Part I, Item 1: "Business," Part I, Item 1A: "Risk Factors" and Part 2, Item 7: "Management's Discussion and Analysis of Financial Condition and Results of Operations." These statements are often identified by the use of words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "should," "estimate," or "continue," and similar expressions or variations. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to: any projections of financial information; any statements about historical results that may suggest trends for our business; any statements of the plans, strategies, and objectives of management for future operations; any statements of expectation or belief regarding future events, technology developments, our customers and collaborative development programs (CDPs), expenses, liquidity, cash flow, growth rates or enforceability of our intellectual property rights and related litigation expenses; and any statements of assumptions underlying any of the foregoing. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements. Accordingly, we caution you not to place undue reliance on these statements. For Intermolecular, particular uncertainties that could affect future results include: our limited operating history; fluctuations in quarterly results; our ability to achieve profitability, which is dependent on, among other things, (i) customer acceptance of our HPC platform as an alternative to conventional research and development; (ii) our ability to collaborate with customers to develop technological innovations sought by our customers; (iii) whether our customers can successfully commercialize products that incorporate technology and IP developed during our CDPs with them, which may be challenging due to fluctuations in the number, price and timing of products sold by our customers and the shortening life cycles of those products, in each case impacting our licensing and royalty revenue; and (iv) our ability to successfully negotiate agreements for payment of license and royalty revenue with potential customers, and to monitor and enforce such agreements with existing customers; our dependence on a limited number of customers; the length of our sales cycles and the possibility that we will devote significant resources to a potential customer that may not result in material revenue, if any; rapid technological changes and market cyclicality in the semiconductor industry; the early stage of development of the clean energy sector and the challenges each industry within the sector faces; our ability to scale our development services to accommodate more CDPs; our ability to make the substantial research and development investments required to stay competitive in our business and to be able to address a wider range of markets and customers; our ability to adequately protect against potential conflicts of interest and breaches of confidentiality among our customers; our ability to work cooperatively with our customers' materials suppliers and equipment manufacturers; the ability of our suppliers to deliver sufficient quantities of materials in a timely manner; our ability to manage our future growth, including an increasing number of employees, customers and CDPs; our ability to scale our development efforts and secure new CDPs with new or existing customers and the timing of those CDPs; the degree to which existing CDPs are completed or expanded; our ability to to realize any expected growth, synergies or benefits from acquisitions, strategic investments or joint ventures we may enter into; our potential need for additional capital to finance our business for purposes that could include potential acquisitions as well as repayment of debt; the potential loss of key personnel; our general ability to compete successfully in challenging markets; risk associated with transactions with related parties; potential warranty claims, product recalls and product liability for our HPC tools and for our customers' products that incorporate technology developed through our CDPs; the costs and risks associated with environmental, health and safety laws and regulations; global or regional economic, political and social circumstances that could adversely affect our business; business interruptions such as earthquakes and other natural disasters; our ability to use our tax credit carryforwards; our ability to effectively protect our intellectual property, including patents, trade secrets and other proprietary information; any potential involvement in intellectual property litigation; and any potential payments to our customers resulting from our intellectual property indemnification policies and obligations. For a discussion of some of the factors that could cause actual results to differ materially from our forward-looking statements, see the discussion on risk factors that appear in Part I, Item 1A: "Risk Factors"

of this Form 10-K and other risks and uncertainties detailed in this and our other reports and filings with the Securities and Exchange Commission, or SEC. The forward-looking statements in this Form 10-K represent our views as of the date of this Form 10-K. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Form 10-K.

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PART I

ITEM 1. BUSINESS

Overview

Intermolecular has pioneered a proprietary approach to accelerate research and development, innovation and time-to-market for the semiconductor and clean energy industries. Through paid collaborative development programs (CDPs) with our customers, we develop proprietary technology and intellectual property (IP) for our customers focused on advanced materials, processes, integration and device architectures. This technology enables our customers to bring optimized, high-volume manufacturing-ready integrated devices to market faster and with less risk than conventional approaches to research and development (R&D). We provide our customers with proprietary technology through various fee arrangements and grant them rights to associated IP, primarily through royalty-bearing licenses. Through paid CDPs and our own development, we have established a portfolio of greater than 1,000 patents and patent applications. Our proprietary approach is broadly applicable to high-volume integrated device markets, which include the markets for semiconductors, flat glass coatings and glass-based devices, solar cells, light-emitting diodes (LEDs), flat-panel displays, advanced batteries and other energy efficiency applications.

Our customers' integrated devices are typically manufactured using thin-film deposition of advanced materials through customized processes that create specific device architecture. It is increasingly necessary to evaluate a wider range of elements in the periodic table, as well as a broader range of processes, to develop advanced device structures capable of addressing particular application requirements. Our proprietary approach to R&D dramatically accelerates the experimentation required to evaluate different combinations of materials and processes.

Our approach consists of our proprietary high productivity combinatorial (HPC™) platform, coupled with our multi-disciplinary team of scientists and engineers. Our HPC platform consists of our Tempus™ processing tools, our unique, automated characterization methods, and our Informatics analysis software. Our platform is purpose-built for R&D using combinatorial process systems. Combinatorial processing is a methodology for experimentation, discovery and development that employs parallel and other high-throughput experimentation, which allows R&D experimentation to be performed at speeds up to 100 times faster than conventional R&D platforms, which are optimized for manufacturing rather than for R&D.

Our HPC platform allows us to perform up to 192 experiments on a single substrate as compared to traditional methods, which typically allow only a single experiment at a time. Our automated characterization systems and proprietary informatics and analytics software can handle the same high-throughput of our platform. Our multi-disciplinary team of approximately 200 scientists and engineers as of December 31, 2013 (of whom approximately 40% have Ph.D.s), designs customized workflows for our customers' specific applications using the HPC platform, and applies the workflows in collaboration with our customers. The combination of the HPC platform and our multi-disciplinary team generates significant competitive advantages for our customers. By accelerating innovation and enabling our customers to commercialize higher-performance and lower-cost integrated devices faster than through conventional methods of R&D, we provide them an opportunity to gain market share and generate higher margins, including through a first-mover advantage. See the section entitled "Our Solution" for an illustration of our approach.

Customers pay us development services fees during the CDPs, which typically last for one to three years. We typically initiate new customer engagements with "micro-CDPs," which are shorter and more narrow in scope than full CDPs; these are intended to give new customers an opportunity to become more familiar with our approach before making a long-term commitment.

Our customers receive rights to the technology and IP developed during the CDPs in exchange for license fees. When our customers commercialize products using this technology and IP, they pay us primarily through royalties. In certain cases, we sell HPC processing tools to our customers who pay a recurring license fee to operate those tools with our combinatorial processing capabilities.

We currently target large, high-volume semiconductor and high-growth emerging clean energy markets, including DRAM, non-volatile memory (including flash memory and embedded memory), complex logic, flat glass coatings and glass-based devices, solar cells, LEDs and other energy efficiency applications. Within these broad markets, we target customers that have track records of technological innovation, deploy significant R&D, manufacturing and sales

and marketing resources and are pursuing technical advancements that are critical to their success and strategy. Our customers include:

•ATMI, Inc. (ATMI)

•Elpida Memory, Inc. (Elpida; a wholly owned subsidiary of Micron Technology, Inc.)

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•First Solar. Inc. (First Solar)
•GLOBALFOUNDRIES Singapore Pte. Ltd (GLOBALFOUNDRIES)
•Guardian Industries Corp. (Guardian)
•Micron Technology, Inc. (Micron)
•SanDisk Corporation (SanDisk)
•Taiwan Semiconductor Manufacturing Company (TSMC)
•Toshiba Corporation (Toshiba)
•Ulyanovsk Center for Technology Transfer of the Russian Federation (UCTT)

Each of ATMI, First Solar, GLOBALFOUNDRIES, and Micron accounted for more than 10% of our revenue for the year ended December 31, 2013, and each of ATMI, Elpida, and GLOBALFOUNDRIES accounted for more than 10% of our revenue for the years ended December 31, 2012 and 2011. ATMI and Elpida have commenced shipping products incorporating technology developed through our CDPs and pay us licensing and royalty fees. To date, we have received the substantial majority of our revenue from customers in DRAM, flash memory, complex logic, materials and energy-efficient applications in flat glass. However, 2012 marked our first year with material revenue from our clean energy industry customers.

In February 2014, Toshiba and SanDisk notified us that they do not intend to enter into a renewal or extension with us of the development activities under our CDP agreement with them. As a result, from and after March 15, 2014, we will no longer provide services to Toshiba or SanDisk under our CDP agreement with them.

Industry Background

High-volume integrated devices serve large and growing markets, including the markets for semiconductors, flat glass, solar cells, LEDs, flat-panel displays, advanced batteries and other energy efficiency applications. Success in these markets requires rapid and cost-effective product innovation, fast time-to-market, competitive pricing, production scalability and the ability to achieve specific product performance requirements. These devices are typically manufactured using thin-film deposition of advanced materials through customized processes that create a specific device architecture. These device structures must then be scaled and integrated into cost-effective manufacturing processes to serve high-volume integrated device markets. Conventional R&D approaches are increasingly challenged by the ever increasing device complexity and the market need to accelerate innovation and time-to-market for the semiconductor and clean energy industries.

Semiconductor Industry

Since the inception of the semiconductor industry more than 50 years ago, innovation has been continually driven by consumer and enterprise demands for smaller, higher-performance, more power-efficient and less expensive electronic products. Recently, this innovation has been driven by broad end-market demand for smartphones, tablet computers, cloud computing, high-definition media, PCs, and advanced aerospace and industrial applications. The semiconductor industry is characterized by intense competition, with many semiconductor companies seeking to gain market advantage over competitors by expanding their broad product portfolios, using their deep design and/or process capabilities and leveraging their IP libraries. Increasingly, these companies are relying on combinations of advanced materials, processes, integration and device architectures to differentiate their products.

Historically, the pace of semiconductor innovation has been enabled by device scaling, in which, according to Moore's Law, the number of transistors in a design generally doubles every two years. This increasing density has reduced costs and improved capabilities over time, thereby driving market demand and growth. However, semiconductors are approaching the limitations of device scaling with the current set of materials and manufacturing processes. Additionally, rapidly growing market demand for consumer mobile devices and applications has led to the need for development of semiconductor devices with increased system-level complexity and lower power consumption. Consequently, semiconductor manufacturers are turning to advanced materials, processes, integration and new device architectures to generate continued device scaling and deliver improved product performance and cost competitiveness. The reliance on advanced materials, processes, integration and new device architectures has in turn made advancements in semiconductor technology increasingly complex and expensive. Each new process node requires experimentation with more elements in the periodic table and more material combinations to deliver the desired physical and electrical characteristics for device performance and manufacturability. For example, the broad

adoption of copper interconnects enabled the industry to continue device scaling in the microprocessor field. However, this advancement required changes not only in materials, but also in processes, integration and device architectures, to achieve high-volume, cost-effective manufacturing. Accordingly, the transition was challenging and slow.

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Semiconductor manufacturing companies have used device scaling to shrink transistors and develop new process technology nodes to address customer requirements for lower cost and higher performance integrated circuits (ICs). However, advanced R&D and new fabrication facility costs have increased significantly over time, especially as the use of advanced materials and processes has become increasingly important to the development and introduction of the latest generation process technology nodes. The greater expertise and higher costs required to explore advanced materials, processes, integration and new device architectures have led to increased specialization among materials, capital equipment, semiconductor manufacturing and IC design companies. However, this specialization has left gaps in the industry knowledge base with respect to the complex interactions among materials science, process technology, device integration and the ability to scale to high-volume, high-performance IC production.

To succeed in the market and deliver an appropriate financial return, semiconductor companies are under intense pressure to rapidly develop optimized ICs and efficiently scale them to cost-effective production. Using advanced semiconductor materials, processes, integration and new architectures requires intensive, time-consuming experimentation because advanced materials are not well-understood, and accurate, robust models do not exist. As a result, semiconductor companies must increasingly rely on time-consuming and resource-intensive empirical R&D to develop innovative solutions and enable manufacturability at lower costs.

For example, we have observed that the flash memory industry is in the process of developing new architectures to address a growing problem of latency between a server's central processing unit and the associated enterprise storage system. Flash memory is well-suited to replace hard disk drives in enterprise storage, but the cost per gigabit of flash storage limits the spectrum of applicable use cases to those that are less cost-sensitive and demand ultra-high bandwidth. The performance and efficiency of a data center is largely determined by the quantity and rate at which data can be supplied from storage to the server for processing. Legacy data center architectures using hard disk drives cannot effectively supply the increasingly large quantities of process-critical data quickly enough to fully utilize the processing capacity of today's servers, leading to low levels of server utilization. Industry-leading flash memory manufacturers are developing new technologies using advanced materials, processes, integration and new device architectures for flash memory to decrease the cost per gigabit beyond traditional device scaling. The ability to bring down the cost of flash storage will accelerate the adoption of flash storage into the large enterprise storage market.

Clean Energy Industry

The emerging clean energy markets also depend on improvements in advanced materials, processes, integration and new device architectures. Clean energy markets, which we define to include the markets for glass coatings and glass-based devices, flat panel displays (FPDs), solar cells, LEDs, advanced batteries and other energy efficiency technologies, are in the early stages of technological evolution. Companies in clean energy markets are in the early stages of understanding materials, processes, integration, device architectures and manufacturing methodologies. As a result, those companies that successfully develop relevant, scalable proprietary materials and device technologies will likely have a competitive advantage over their peers in both time-to-market and price.

Decreasing prices, government policies and social awareness are driving growth in the clean energy markets and certain sectors have entered high-volume production. Reduced prices and improved performance relative to traditional alternatives generally catalyzed widespread adoption of new technologies. For example, LEDs for the general illumination market are currently more expensive to purchase than incandescent and fluorescent lighting. To increase penetration of the general lighting market, price reductions and improvements in performance, such as brightness, color and form factor will be critical. New advanced materials, improved process technologies and new device architectures will enable larger wafer sizes, less costly substrate materials, higher-volume production and improved yields for lower-cost and higher-performing LEDs.

Improved performance relative to traditional alternatives is also driving the need for new materials, process integration, device architectures and manufacturing methodologies in the FPD market. For example, growth in mobile devices and higher-resolution displays are driving the need for higher refresh rates and lower power consumption. This is introducing new material changes to the Thin Film Transistor (TFT) backplane which has historically been silicon-based. As a result, the display industry is exploring metal oxides as a future replacement TFT backplane that requires fundamental understanding of the materials and device integration in manufacturing.

Because of the early stages of technology development in the clean energy markets, there are significant opportunities for cost savings and competitive advantage. Market participants who resolve the price-performance challenges ahead of their competitors through advanced materials, processes, integration and new device architectures may greatly accelerate market adoption of their technologies and establish themselves as market leaders. These opportunities amplify the importance of empirical R&D to develop low-cost, high-performance solutions in these early-stage markets.

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Current Challenges with Innovation in High-Volume Integrated Device Markets

Advanced materials and device integration are driving forces behind technology advancement in high-volume integrated device markets. In addition, innovation in these markets and control of the resulting IP are critical to enable competitive differentiation. However, the existing approach used to explore new materials, processes, integration and device architectures (referred to as learning cycles) is complex and time-consuming.

Traditionally, device manufacturers have conducted conventional R&D using expensive high-volume manufacturing tools that are not specifically built for that purpose. Production tools typically can only run one process at a time, which leads to limited cycles of learning. Furthermore, using tools deployed in a production environment for R&D requires reserving tool time on high-volume manufacturing lines to evaluate each experiment, resulting in substantial opportunity costs for existing product manufacturing. High-volume manufacturing environments are also not conducive to R&D because these environments require stability to minimize risk and to reduce contamination that the research-based introduction of new materials, tools or processes may cause. Additionally, high-volume manufacturing is conducted by operators focused on repetitive, mistake-free processing, not on many cycles of data generation and analysis. In addition to some of the challenges above, certain clean energy device manufacturers use laboratory-scale tools for R&D, which do not address the scale-up requirements critical to high-volume manufacturing. These factors combine to increase development risks due to long learning cycles, limited data sets, narrow exploration capabilities and slow time-to-market.

Successful R&D programs require flexibility around experimentation and the introduction of new materials, chemicals, processes, integration flows and tools to derive the most efficient high-volume integrated device solutions. Furthermore, we believe they are best administered by scientists and engineers with experience across various disciplines of equipment, materials, integration, device architectures and processes to conduct successful experiments and derive optimized solutions.

The following existing approaches have been used to complement internal R&D, but each has specific limitations:

- Equipment suppliers. Equipment suppliers provide high-volume manufacturing solutions that are not purpose-built for researching the interaction of advanced materials, processes, integration and device architectures. Additionally, they provide solutions that are not always uniquely tailored to specific customer applications.

- Industry consortia. Industry consortia provide solutions that offer no competitive differentiation because the customer must share the IP with all consortium participants, including competitors.

- Alliance partnerships. Alliance partnerships impose limitations on the overall outcome, as they are typically structured to find generic solutions rather than the solutions for a particular application. Additionally, these generic solutions are offered to a small set of competitors and are not customer-specific or application-specific.

- University research. University research provides theoretical solutions requiring additional work and time to commercialize, since this work typically does not address manufacturing or commercialization challenges.

- Third-party IP licensing. Third-party IP licensing is primarily used for defensive purposes or market access. Those who cross-license IP do not necessarily receive a solution that is specific to the customer, manufacturing process or application, and the received solution is not differentiated from what their competitors receive through the same license.

Substantially improved methodologies are required to generate the learning cycles necessary to accelerate innovation, improve product development and ensure manufacturing scalability of high-volume integrated devices. Further, companies require new ways to develop proprietary technology and obtain IP rights to support competitive advantage for their new products.

Our Solution

We have pioneered a proprietary approach to accelerate research and development, innovation and time-to-market for the semiconductor and clean energy industries. Using our approach, we develop technology and IP rights focused on advanced materials, processes, integration and device architectures in collaboration with our customers. This technology enables our customers to bring optimized, high-volume manufacturing-ready integrated devices and other products to market faster and with less risk than conventional approaches to R&D. Our proprietary HPC platform consists of our Tempus HPC processing

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tools, automated characterization, and informatics and analysis software. Our HPC platform increases R&D productivity because it is purpose-built for R&D and utilizes advanced combinatorial processing systems, which allow for experiments to be performed at speeds up to 100 times faster than traditional methods. We provide our customers with proprietary technology through various fee arrangements and grant them rights to IP developed during the collaboration, primarily through royalty-bearing licenses. Our multi-disciplinary team of approximately 200 scientists and engineers as of December 31, 2013, of whom approximately 40% have Ph.D.s, designs customized workflows for our customers' specific applications using our HPC platform, and applies the workflows in collaboration with our customers to develop proprietary technology for them.

The key elements of our HPC platform include the following:

- Tempus HPC processing. We use our Tempus HPC processing tools to rapidly process different experiments consisting of various combinations of materials, processing parameters, sequencing and device structures. We are able to perform up to 192 experiments on a single substrate, as compared to conventional methods, which typically allow only a single experiment at a time.

- Automated characterization. We use automated characterization systems to characterize the substrates processed by our Tempus HPC processing tools, thereby generating experimental data at a speed that matches our processing throughput.

- Informatics and analysis software. We use our informatics and analysis software to automate experiment generation, characterization, data analysis and reporting (in each case matching our processing throughput), and to create an aggregated and searchable database of information that includes the experimental results we generate.

The following graphic illustrates how these elements combine to form our HPC platform:

Benefits to Our Customers

Our business model aligns our interests with those of our customers as we collaborate to develop optimized, differentiated, manufacturing-ready IP for high-volume integrated devices. We provide our customers with proprietary

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technology through various fee arrangements and grant them rights to IP developed during our CDPs, primarily through royalty-bearing licenses. Our differentiated platform solution and approach to collaborative engagements are designed to deliver the following significant benefits to our customers:

- Accelerated time-to-market with better, lower-cost products. Faster processing of experiments, throughput-matched characterization and real-time data management and analysis allow additional learning cycles and broader exploration of materials and process solution combinations. In highly competitive markets, the resulting speed to market with improved, lower-cost products enables our customers to gain market share and improve profitability.

- Development of application and manufacturing-ready IP tailored to our customers' specifications. When we engage in a CDP with our customers, we use our HPC platform and customized workflows to develop IP-protected, proprietary technology that is tailored to our customers' applications and ready for high-volume manufacturing. We provide our customers rights to the IP for their applications primarily through royalty-bearing licenses.

- Increased R&D productivity and reduced technology risk. Using our combinatorial processes, we narrow the potential combinations of advanced materials, processes and device architecture solutions through a series of increasingly rigorous screening stages to guide the selection of solutions that meet device performance requirements and that are cost-efficient and ready for high-volume manufacturing. The combinatorial process of screening and evaluating these solutions and their manufacturability mitigates our customers' technology risk earlier in the development cycle.

Strengths

We have pioneered, developed and patented a proprietary platform and methodology for accelerating R&D in the semiconductor and clean energy markets. Our strengths include:

- Proprietary and patented HPC platform. Our HPC platform employs proprietary and patented combinatorial methods to parallel and rapid-serial process up to 192 experiments on a single substrate as compared to conventional methods, which typically allow only a single experiment at a time. As of December 31, 2013, we owned or had exclusive rights within our field of use to 1,230 U.S. patents and patent applications (some of which also have foreign counterparts), which provide us with a competitive advantage in the use of combinatorial methods and systems in our target markets.

- Flexible technology platform configurable for and extendable to multiple markets. Our HPC platform can be configured for many applications and extended to address the broad set of integrated device markets. Because of the similarities and synergies in materials deposition, manufacturing processes and device integration complexities across markets, our platform allows us to create customized workflows and support innovation across multiple markets.

- Seasoned engineering team with multi-disciplinary expertise. We have assembled a multi-disciplinary team of approximately 200 scientists and engineers, of whom approximately 40% have Ph.D.s, with expertise across various disciplines, fields and technologies, including materials science, chemistry, physics, engineering, process equipment development, software and informatics, process development and integration, device technologies and device integration.

- Deep expertise in advanced materials, processes, integration and device architectures. We have accelerated innovation for a broad set of customers across multiple markets. During a CDP, our team and our platform enable more rapid comprehension and learning about advanced materials, processes, integration and device architectures, some of which is applicable across markets. We aggressively protect IP that we generate with customers. IP such as materials characteristics, optimized processes and interoperability of systems and architectures can be applicable beyond the field of use of the CDP and can benefit new customers without impacting competitive differentiation of current customers.

- Collaborative customer engagements leading to IP generation and strategic alignment. Customers pay us development service and HPC platform subscription fees during multi-year CDPs. We grant them rights to proprietary

technology and IP developed during our collaborations. As customers successfully commercialize products incorporating technology developed through the CDPs, we receive licensing fees and/or royalties. In certain cases, we sell HPC processing tools to our customers, and customers pay us a license fee for use of our

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HPC platform and associated software. This alignment of interests facilitates collaboration and open communication that improves development efficiencies and is more likely to result in innovative, differentiated products.

- Attractive business model with contracted CDP revenue and recurring high-margin royalties. Our multi-year CDPs generate predictable CDP and services revenue from our customers. Our CDPs also establish the terms upon which we will receive licensing and royalty revenue from the sale of our customers' products that incorporate technology developed through our CDPs. These licensing and royalty arrangements create a business model with attractive margins and a high degree of near-term visibility. Licensing and royalty revenue over the past three years has accounted for 22%, 24%, and 27% of revenue in the years ended December 31, 2013, 2012 and 2011, respectively, and we expect the percentage will increase going forward as more of our customers license our developed technology and commercialize and ramp production of products incorporating technology developed through our CDPs.

Our Strategy

Our mission is to drive our customers' success by transforming R&D and accelerating innovation in markets that derive competitive advantage from the interaction of materials science, processes, integration and device architecture. To accomplish this, we:

- Target large, high-volume semiconductor markets. We target customers in large, high-volume semiconductor markets, including DRAM, flash memory and complex logic. Success in these markets requires semiconductor companies to consistently remain at the leading edge of cost and performance, which demands innovation around materials science, processes, integration and device architectures.

- Target large, high-growth, emerging clean energy markets. We target customers in large clean energy markets with high growth or continued high growth potential, including the markets for flat glass coatings and glass-based devices, thin film and crystalline solar cells, LEDs and other energy efficiency technologies. We believe we can deliver significant improvements in cost, performance and manufacturability in these markets with our HPC platform.

- Engage with existing and potential market leaders in our target markets. We enter into CDPs with companies that are well-positioned to lead their markets. We engage with customers that have track records of technological innovation, deploy significant resources and are pursuing advancements that are critical to their success and strategy.

- Create proprietary IP with our customers. We develop differentiated, IP-protected technologies with our customers, and we grant them rights to these technologies and IP, primarily through royalty-bearing licenses. We structure our customer engagements so that our business interests align with their market success.

- Enhance our HPC platform and multi-disciplinary team. We continue to develop, broaden and protect our processing, characterization, data analysis and workflow capabilities. To enhance our existing platform, we recruit personnel with broad, highly technical skill sets.

- Explore and develop new technologies in high-volume integrated devices. We will continue to explore and internally develop new technologies and expertise to serve future customers in our targeted markets, including, in particular, clean energy. We will focus these efforts in markets that are in the early stages of development to speed innovation, capture value and facilitate success for customers.

Our Platform

HPC Workflows

We begin the development and discovery process by working with our customers to define the specific requirements that a new solution should have in order to meet the needs of a given application. These criteria can be beyond the performance attributes of currently available solution sets. We then apply the components of our HPC platform to develop and discover solution sets that match these criteria.

Once an experiment is processed, the data sets of each experiment are stored in a secure database and analyzed for desired properties. As with processing, our clean room labs include a broad array of characterization and metrology

instruments and software to evaluate different properties under a wide variety of process conditions. These properties include physical,

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electrical, mechanical, thermal, chemical, and optical properties. In general, we are able to design, process and characterize tens to hundreds of experiments in a single day.

To reach the point of commercialization or transfer to our customers' manufacturing process qualification, a solution set must progress through an extensive series of screening stages, as described below. Below is an illustration of the screening process of the HPC platform for use in evaluating materials, unit processes, and process sequences:

- Primary Screening. Primary screening incorporates and focuses on materials discovery. Materials are screened for certain properties to select possible candidates for a next level of screening. In the initial primary screening there may be thousands of candidates that are subsequently reduced to hundreds of candidates.

- Secondary Screening. Solution candidate materials from primary screening are advanced to secondary screening processes that will examine materials and unit process development. In this secondary screening, processes and integration are considered to narrow the candidates from hundreds of candidates to tens of candidates.

- Tertiary Screening. Solution candidate materials and process conditions that continue to meet or exceed the defined criteria through the secondary screening stage are then either transferred to our customer or processed internally for additional characterization and scale up. These candidates are then characterized on a larger scale, and correlation of the desired process is developed to allow the transfer of the developed technology to a manufacturing scale process.

- Manufacturing and Commercialization. Once a candidate has passed this development scale analysis, it is ready for commercialization and the customer will decide whether to commercialize the developed technology.

Secondary screening begins while primary screening is still ongoing, and while we are still generating additional primary screening candidates. Tertiary screening begins once we have identified a reasonable set of options from secondary screening, and while we are still generating additional secondary screening candidates. As these stages overlap, there may be feedback from later stages that is then incorporated back into an earlier stage to further optimize the selection of materials, unit processes and process sequences.

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Wet Processing Tools

We offer a series of wet processing tools that apply HPC methods to fluids-based applications such as cleans, deposition, wet etch, self-assembly, and surface treatment processes. These tools, which can be used alone or in combination, include:

- Tempus F-10. A stand-alone system used for primary screening through the automatic creation of formulations, especially those involving powders and viscous liquids.

- Tempus F-20. A stand-alone system for materials and process screening, which is used for library creation as well as processing of wafer coupons. This product can be used for primary or secondary screening, depending on the reactor block design and the substrate type.

- Tempus F-30. A stand-alone system for integration and tertiary scale up screening, which is used to scale up the most promising results from primary and secondary screening to full patterned wafer processing.

Dry Processing Tools

In addition, we offer dry processing tools that apply HPC methods to vapor-based applications. Each of these tools can be used in primary, secondary and tertiary screening. These tools, which can be used alone or in combination, include:

- Tempus P-30 HPC Physical Vapor Deposition (PVD). A 300mm chamber with the ability to use up to four PVD sources and three optional deposition methods (including DC, RF and pulse DC) on a vast range of film thicknesses and/or compositions and/or film stacks within each site-isolated region of a substrate.

- Tempus A-30 HPC Atomic Layer Deposition (ALD). A 300mm chamber capable of site isolation of both metal and dielectric films across quadrants of the wafer, with the ability to introduce variation of film thickness and/or composition and/or film stacks within each quadrant.

- Tempus ST-30 Surface Treatment. A 300mm chamber capable of exposing critical layers pre or post dry deposition at variable temperatures to different chemistries which can be modulated by the chamber's downstream plasma source.

- Tempus AP-30. A configurable platform with multiple A-30, P-30 or ST-30 chambers and common support modules to facilitate in-situ processing of ALD, PVD or Surface Treatment for rapid screening of thin-film metal alloys, dielectrics and multilayer stacks. Processes can be scaled to facilitate high-volume manufacturing.

Automated Characterization

Immediately after processing substrates on our Tempus HPC processing tools, we use automated and customized characterization instruments to rapidly generate physical and electrical data from the experiments. The aggregated data is automatically loaded into our informatics data warehouse. As with processing, our clean room labs include a broad array of characterization and metrology instruments and software to evaluate different properties under a wide variety of process conditions. Our characterization instruments are optimized to match the throughput of our processing tools to maximize experimental learning cycles.

Informatics Software, Analysis and Services

Our informatics software has the ability to automate the capture and storage of HPC processing, characterization, and metrology data, and then to evaluate, summarize and securely distribute this data in real time to the appropriate parties. Additionally, we use our informatics software to leverage experiments processed and characterized in the past for a customer to increase the speed and effectiveness of the engagement. The key components of our informatics software include:

- Workflow Management Software. Manages the design and process of experiments, metrology and collection of data and summarizes aggregated data for the various working teams in the form of status reports; provides our customers with real-time access to results of our experiments and analysis.

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Analysis and Reporting Software. Provides data and analysis tools to evaluate process distributions, correlate electrical distributions, map defectivity distributions, perform spectral analysis and facilitate interactive creation of summary reporting.

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- Security and Collaboration Management Software. Provides secure communication between geographically dispersed working teams, ensures the security of created documentation and presentations, manages the minutes for meetings, provides programs and project plans to coordinate working teams, shares summary reports across the working team and provides reviews of finished processes and status of ongoing processes.

- Integration Services. Facilitate collaboration between our tools and the customer's process and metrology tools, automate the recipe loading, automate data collection and leverage software to customize reports.

Our Technology

Embedded throughout our hardware and software, our technology is based upon the parallel and/or rapid serial experimentation capabilities of combinatorial methods. High-productivity combinatorial methods generally refer to techniques that vary materials, unit processes, process, and device integration sequences across multiple regions of one or more substrates, the output of which can then be evaluated in parallel or rapid serial fashion. Our informatics software and analytical methods characterize and analyze these combinations of materials, unit processes, process, and device integration sequences for the most promising solutions in a structured, automated and throughput-matched fashion. The relationship between materials, processes, integration and device output are established earlier in the development process, so that performance and manufacturability considerations are taken into account from the outset, instead of late in the R&D process.

Although our approach is unique in the semiconductor and clean energy industries, combinatorial technology has been widely used in other industries, especially where new materials function as primary enablers of product innovation. Examples include the pharmaceutical, biotechnology, and energy sectors, where combinatorial techniques have been accelerating development since the early 1990s.

We are able to deploy and benefit from our proprietary combinatorial methods because of our multi-disciplinary technical team. The following shows important characteristics of our technical team:

Our Collaborative Development Programs

Our CDPs allow our customers to collaborate with our multi-disciplinary team on specific technical challenges. Our CDP work is primarily carried out at our facility in close collaboration with our customers. We have established strict processes and procedures to protect our customers' confidential information during these CDPs. In addition, we support device qualification for pilot manufacturing at our customers' manufacturing and development sites. Customer teams and our teams collaborate on development of new materials, unit processes, process modules and integration sequences, and qualify the supply chain for high-volume manufacturing. Our multi-disciplinary team can rapidly adapt our Tempus HPC platform to meet customer requirements and develop and optimize device and product technologies that will contribute to successful customer programs.

We typically initiate new customer engagements with smaller, customer-paid programs called micro-CDPs. Our micro-CDPs precede the full CDP. These are smaller programs that require significantly less investment from our customers but allow us to demonstrate the capabilities of our HPC platform to a customer without requiring them to commit to a longer-term

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agreement. We use these micro-CDPs to demonstrate the capabilities and value of our HPC platform to these new customers, with the objective of engaging with these customers in a full CDP.

Our CDPs are designed to result in the development of proprietary technology and IP for new devices, manufacturing process technology and materials, which we license to our customers for use in volume production. We provide our customers with proprietary technology through various fee arrangements and grant them rights to associated IP primarily through royalty-bearing licenses.

In the early stages of developing our business, we structured engagements with customers to allow us to continue to grow while also giving customers an opportunity to invest in our business and success. During 2013 we did not provide our customers or partners with opportunities to invest in our company, independent of their ability to do so in the open market.

Our Customers

Our customers include semiconductor device, semiconductor materials and equipment and clean energy market leaders, including ATMI, Elpida, First Solar, GLOBALFOUNDRIES, Guardian, Micron, SanDisk, TSMC, Toshiba and UCTT. Typically, our customers engage in CDPs with our team leveraging our HPC platform to develop and commercialize high-volume integrated devices using collaboratively developed technology. To date, ATMI and Elpida have already successfully developed products through their CDPs and we have granted them rights to the associated technology and IP rights through royalty-bearing licenses. Successes in our initial CDPs have led to expanded relationships and follow-on programs with existing customers for new products and applications.

The majority of our revenue during 2013 came from our four largest customers, ATMI, First Solar, GLOBALFOUNDRIES and Micron, which represented a combined 55% of our total revenue during the year ended December 31, 2013. The majority of our revenue during the two years ended December 31, 2012 and 2011 came from our three largest customers for those periods, ATMI, Elpida and GLOBALFOUNDRIES, which represented a combined 67% and 64%, respectively. We believe that the revenue concentration associated with these customers will likely decline as our other customers begin to transition technology developed through CDPs into licensing and royalty revenue and as we continue to enter into new CDPs with new and existing customers in the semiconductor and clean energy markets.

In February 2014, Toshiba and SanDisk notified us that they do not intend to enter into a renewal or extension with us of the development activities under our CDP agreement with them. As a result, from and after March 15, 2014, we will no longer provide services to Toshiba or SanDisk under our CDP agreement with them.

Intellectual Property

Our success depends in large part on our IP. We have patented and continue to seek patent protection for combinatorial methods and systems included in our HPC platform. We have also patented and continue to seek patent protection of innovations that result from applying our HPC platform to design, develop and manufacture ICs, solar cells, glass coatings and glass-based devices, LEDs and thin films for electronics, optical and energy applications (Program IP). We may develop Program IP either on our own or in collaboration with our customers through CDPs.

As of December 31, 2013, we owned or had exclusive rights to 1,230 U.S. patents and patent applications (some of which also have foreign counterparts). Of the 904 U.S. patents and applications that we owned as of December 31, 2013, 44% are related to the HPC platform and 56% are related to Program IP. We also have a license to approximately 326 U.S. patents and applications granted to us by Symyx Technologies, Inc. (Symyx), a wholly-owned subsidiary of Accelrys, Inc. that exclusively provided us the right to use combinatorial methods to develop Program IP.

As of December 31, 2013, we owned 131 patents and 157 patent applications related to our HPC platform in the United States, and 52 patents and 47 patent applications in other jurisdictions. The expiration dates of these patent rights range from October 2014 to December 2033. We continue to file patent applications to seek protection for further advancements of our HPC platform. We own all rights to such patents and generally do not grant licenses to third parties under these patents other than in connection with their use of our HPC platform. Our patents and patent applications cover the following aspects of the HPC platform:

- Combinatorial systems and methods related to fluids-based processing.
- Combinatorial systems and methods related to vacuum-based processes, including deposition and etch.

- Systems and methods for site-isolated processing.
- Combinatorial systems and methods related to high-volume manufacturing.
- Processing techniques using combinatorial and non-combinatorial methods.

We also have and seek patent protection for innovations we develop internally on our HPC Platform, either on our own or in collaboration with our customers through CDPs. Such innovations cover advancements in new materials, processes,

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process conditions, process sequences and device architectures in applications such as semiconductor memory, semiconductor complex logic, glass coatings and glass-based devices, solar cells and LEDs. As of December 31, 2013, we owned 109 patents and 288 patent applications in the U.S. covering Program IP, as well as 55 patent applications in other countries.

In most cases, we maintain an ownership interest in the Program IP that results from CDPs and we grant licenses under this Program IP to the CDP customer. Such licenses generally allow the CDP customer to have exclusivity for a limited term in a particular field. We keep the right to grant licenses under the CDP patents outside that field. Furthermore, if the CDP customer elects to not extend the term of exclusivity beyond the limited term, we have the right to grant licenses to third parties within the field. We assign separate teams for each CDP, maintain separate databases of experimental data and limit access to such databases only to the specific team that assists the CDP customer.

We may also develop Program IP internally where we believe such IP may have broad applicability in the relevant market. We are able to leverage this Program IP to begin CDPs with new customers. In addition, our ability to own the Program IP in these situations allows us to leverage learning and patent protection across industries and applications while providing our existing customers with the IP rights they desire to gain competitive advantage in their fields for the markets they serve.

Sales and Marketing

We sell and market our solutions worldwide through our own sales force by developing direct relationships with our customers. We have sales personnel located in Japan, Taiwan, Europe and the United States, including account managers, who are responsible for specific customer accounts. We have product marketing personnel, who provide business development support and application and workflow platform expertise.

Our business development and product marketing group focuses on our strategy, platform and technology roadmap, new platform introduction process, demand assessment and competitive analysis. The group coordinates new application evaluation and development both internally with our engineering teams and externally with new and existing customers. As market opportunities arise for our products and services, we intend to increase our sales and marketing efforts and further expand our business development and product marketing organization.

Manufacturing

We manufacture our HPC tools through partnerships with experienced contract manufacturers that manufacture and assemble sub-assemblies incorporating our designs. We believe that our third party manufacturers have adequate sources and supplies of the raw materials needed to manufacture our products. We believe that partnering with contract manufacturers provides us with access to the most current facilities and processes without significant capital outlay on our part, allowing us to focus our resources on R&D, product design and CDP support. Although we have historically relied on a small number of contract manufacturers for the manufacture and assembly of a majority of our workflow platforms, we have relationships with a variety of contract manufacturers and are not dependent on any single contract manufacturer.

Research and Development

We conduct R&D activities for CDPs and for internal research and development on both workflow platform development and application R&D. As of December 31, 2013, we employed a research and development team of 203 full-time employees. This R&D team includes many experienced engineers, scientists and managers with advanced degrees from leading universities around the world and experience with leading chip manufacturers, solar PV companies and equipment and materials suppliers. We believe these R&D professionals on our team have enabled us to develop our HPC platform, support customer CDPs, implement our technology roadmap rapidly and provide us with the foundation for our technology advancement in the future.

We devote a substantial portion of our resources to engineering of our next-generation platforms by integrating future generations of technology and developing standardized software and hardware modules. We work closely with multiple vendors during the development of new workflows or workflow modifications for use in our future platforms. The synergies among existing and new workflows often enable us to operate with adjacent vertical technologies such as clean energy markets. Our R&D expenses were $24.5 million, $21.8 million, and $19.3 million for the years ended December 31, 2013, 2012 and 2011, respectively; this represented approximately 36%, 33%, and

36% of our revenue in those years, respectively.

Competition

The principal capabilities required to be competitive in our market include technical expertise, processes and integration capabilities, diversity of platform offerings, development speed and performance, quality and reliability of engineers, depth of collaboration with customers and technical support. We believe we compete favorably with respect to these factors because of the breadth of capabilities of our HPC platform, the depth of multi-disciplinary expertise of our internal research team and external engineering teams who collaborate with customers and our use of combinatorial processing and

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throughput matched characterization and analysis. These differentiating factors allow us to explore more comprehensive solution sets and provide faster solutions to our customers. We are not aware of any companies that currently compete or have to date competed with us in the use of combinatorial methods in semiconductor and clean energy R&D applications; however, we do believe that we compete for the R&D resources of our customers with third-party IP licensors, equipment suppliers, industry consortia, alliance partnerships and university research teams. In addition, many of our customers design, develop, manufacture and market solutions based on their own unique device architectures and develop their own intellectual property in-house.

A portion of our revenue is generated from the sales of end products by our customers, and our competitive position therefore is dependent on their competitive positions. The markets for our customers' products that incorporate technology developed through our CDPs are intensely competitive and characterized by rapid technological change. These changes result in frequent product introductions, short product development cycles and increased product capabilities typically representing significant price and performance improvements.

Environmental Regulation

We are subject to various foreign, federal, state and local environmental laws and regulations governing, among other matters, emissions and discharges of hazardous materials into the air and water, the use, generation, storage, handling, transportation and disposal of, and exposure to, hazardous materials and wastes, remediation of contamination and employee health and safety. In addition, under certain of these environmental laws, liability can be joint and several and without regard to comparative fault. Our operations involve the use of hazardous materials and produce hazardous waste, and we could become liable for any injury or contamination that could arise due to such use or disposal of these materials. Failure to comply with environmental laws and regulations or to obtain or maintain required environmental permits could result in the imposition of substantial civil and criminal fines and sanctions, could require operational changes or limits or the installation of costly equipment or otherwise lead to third party claims. Future environmental laws and regulations, stricter enforcement of existing laws and regulations, or the discovery of previously unknown contamination or violations of such laws and regulations could require us to incur costs, or become the basis for new or increased liabilities or subject us to fines or other sanctions.

Employees

As of December 31, 2013, we had a total of 253 full-time employees, consisting of 203 people engaged in CDPs and R&D activities and 50 people in sales and marketing, legal, finance and other general and administrative roles. None of our employees are represented by a labor union, and we consider our employee relations to be good. On February 3, 2014, we instituted a reduction in force as part of an overall plan to reduce our cost structure. This reduction in force constituted approximately 18% of our workforce, and is anticipated to be completed during the first quarter of 2014. Our CDPs are labor-intensive, and we evaluate our hiring needs on a project by project basis, taking into account current and anticipated CDP timelines and lifecycles, as well as the availability of highly-skilled scientists, engineers and other technical staff needed to support the CDPs. We believe our location in San Jose, California provides us with access to a large population of highly-skilled personnel who will be able to meet the technical requirements necessary to support our existing and new CDPs.

Financial Information about Segments and Geographic Areas; Backlog

We derive a significant portion of our revenue from customers that are based in foreign countries, particularly those based in Japan. Revenue generated from customers in Japan accounted for 19%, 20%, and 28% of total revenue for the years ended December 31, 2013, 2012 and 2011, respectively. We expect that a significant portion of our total future revenue will continue to be derived from companies based in Japan and other foreign countries.

For geographic information, see Note 12 to our consolidated financial statements included in this Form 10-K. We report all of our business activities as a single reporting segment.

Our backlog as of December 31, 2013 was $56.4 million, of which $30.4 million is scheduled to be recognized as revenue during 2014 and $26.0 million is scheduled to be recognized as revenue in periods beyond 2014. As of December 31, 2012, we had backlog of approximately $77.2 million.

Customer and Collaborative Agreements

The descriptions below contain only a summary of the material terms of the customer engagements entered into as of December 31, 2013, as well as any subsequent material amendments thereto, and do not purport to be complete. These

descriptions are qualified in their entirety by reference to the respective agreements.

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Collaborative Development Program Agreement with GLOBALFOUNDRIES

In June 2011, we entered into a CDP agreement with GLOBALFOUNDRIES to develop and improve certain semiconductor products. Under the agreement, we are providing development services to GLOBALFOUNDRIES and have granted to GLOBALFOUNDRIES a non-exclusive license to use our proprietary HPC platform (which includes a subscription to the platform and a license to the associated software) for the purpose of developing and improving certain semiconductor products. We agreed to dedicate certain resources to support the development activities under the CDP. We also granted GLOBALFOUNDRIES an option to purchase certain HPC processing tools.

Each party will own the rights arising out of the CDP technology solely created by its inventors (CDP IP). Rights arising out of the CDP technology that is created jointly will be jointly owned. We agreed that we would not grant a license under our rights in the CDP IP to any third party outside a certain field without the prior written consent of GLOBALFOUNDRIES.

When GLOBALFOUNDRIES commercializes products that incorporate the CDP IP, GLOBALFOUNDRIES will owe us royalties on sales of those products. GLOBALFOUNDRIES may grant sublicenses to use the CDP IP to third parties, but must share with us the royalties it receives from certain third party sublicenses. During the development period, GLOBALFOUNDRIES is paying us (i) fees for providing development services, (ii) subscription and license fees for use of the HPC platform, and (iii) certain pre-approved expenses and material costs.

The initial period for development activities under the CDP is three years, which period will automatically renew for additional one-year periods unless either party elects to terminate. The initial term of the agreement is five years from the date of the last sale of a product that incorporates CDP IP.

In February 2014, GLOBALFOUNDRIES agreed to accelerate the payment of all amounts that are due to us in 2014, which include (i) the fees due to us from them in exchange for us supplying full-time employees or contractors dedicated to supporting the development activities under the CDP in 2014 and (ii) the minimum payments due to us from them in exchange for the licenses granted by us to them for the calendar year 2014. We further agreed with GLOBALFOUNDRIES to suspend development activities under the CDP for the remainder of 2014, with the parties agreeing to discuss future collaborations for calendar year 2015.

Collaborative Development Program Agreement with Toshiba and SanDisk

In March 2010, we entered into a CDP agreement with Toshiba and SanDisk to develop certain memory technologies and related materials. Under the agreement, we are providing development services to Toshiba and SanDisk and we granted Toshiba and SanDisk non-exclusive use of our proprietary HPC platform (which includes a subscription to the platform and a license to the associated software). The initial period for the development activities was two years, with the option to extend for up to two additional one-year periods. In March 2012, we amended the CDP agreement to extend the initial term of development for an additional year (through March 2013). For this additional year, Toshiba and SanDisk retain their exclusive collaboration license in the field of memory chips.

Toshiba and SanDisk own the rights to the technology and IP arising out of the CDP (CDP IP) that is based on Toshiba or SanDisk background technology or that is solely developed by Toshiba or SanDisk. We own the rights to the technology and CDP IP that is solely developed by us and that is based on our background technology. Jointly developed technology and CDP IP that is based on our background technology is jointly owned. Patent rights based on technology resulting from design of experiments, or based on technology solely developed by us that is based on Toshiba or SanDisk background technology, is also jointly owned.

We granted Toshiba and SanDisk an exclusive license to the rights we own in the technology and CDP IP during the term of the CDP. After the conclusion of the CDP term, in exchange for payments, as applicable, Toshiba and SanDisk each shall have the option (i) to continue to maintain an exclusive license to certain or all of the CDP IP; (ii) to convert the exclusive license to non-exclusive; or (iii) to terminate the license to the CDP IP but retain a non-exclusive license to certain background IP.

Toshiba and SanDisk have agreed to pay us volume-based royalties on sales of products that incorporate the CDP IP, subject to certain minimum and maximum levels. Their obligations to pay royalties under the licenses we grant to them shall continue for the duration of the licenses. During the development period, Toshiba and SanDisk are paying us (i) fees for providing development services, (ii) subscription and license fees for use of the HPC platform and associated software, and (iii) certain pre-approved expenses and material costs. Toshiba or SanDisk may request that

we grant to other third parties a royalty-bearing license to the CDP IP.

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In March 2013, we agreed with Toshiba and SanDisk to extend development activities under the CDP through March 15, 2014, with us continuing to provide services and licenses to our technology in exchange for agreed-upon fees. We further agreed with Toshiba and SanDisk to reduce the minimum annual royalty levels due to us from them for the first two (2) years after the end of the extended development period. In February 2014, Toshiba and SanDisk notified us that they do not intend to enter into a renewal or extension with us of the development activities under the CDP. As a result, from and after March 15, 2014, we will no longer provide services to Toshiba or SanDisk under the CDP agreement. The terms of the ownership of the CDP IP and licenses under any IP rights resulting from the CDP IP remain unchanged, and Toshiba and SanDisk will continue to have an obligation to pay us royalties in connection with any future sales of products incorporating or using the CDP IP.

Advanced Memory Development Program Agreement with Elpida

In May 2008, we entered into an Advanced Memory Development Program Agreement with Elpida relating to a CDP to develop and improve certain advanced memory products. The Elpida agreement was supplemented and/or amended in August 2008, January 2009, May 2009, July 2010 and December 2012.

Under the agreement, we are providing development services to Elpida and we granted Elpida non-exclusive use of our proprietary HPC platform (which includes a subscription to the platform and a license to the associated software) for the purpose of developing and improving certain advanced memory products.

We own the rights for certain technology and IP arising out of the CDP (our CDP IP). Elpida owns the rights for certain other technology and IP arising out of the CDP (Elpida CDP IP). All other technology and IP arising out of the CDP is jointly owned by Elpida and us (joint CDP IP). We also granted Elpida an exclusive license to use our CDP IP and the joint CDP IP in certain fields during the term of the agreement.

Elpida has agreed to pay us royalties on sales of products that incorporate our technology, our CDP IP, Elpida CDP IP or joint CDP IP, subject to certain minimum and maximum levels. Elpida's obligation to pay royalties will continue for the duration of its licenses. During the development period Elpida is paying fees for development services, subscription and license fees for use of the HPC platform, and certain pre-approved expenses and material costs.

The current period for development activities and use of the HPC platform is through April 1, 2013, after which the exclusive license will convert to a non-exclusive license unless Elpida meets certain minimum quarterly sales thresholds from high-volume manufacturing of royalty-bearing products. In December 2012, we amended the agreement to (i) confirm that the CDP IP would be first utilized by Elpida in a product by January 1, 2013; and (ii) agree on an annual fee and payment schedule for Elpida's use of the CDP IP starting in 2013.

In February 2012, Elpida filed a petition for commencement of corporate reorganization proceedings under the Japan Corporate Reorganization Act in the Tokyo District Court. In July 2012, the trustees appointed by the Tokyo District Court entered into a sponsorship agreement with Micron pursuant to which Micron has agreed to purchase the outstanding stock of Elpida subject to various terms and conditions expressed therein including obtaining approval of the creditors. In October 2012, the Tokyo District Court referred Elpida's plan of reorganization for creditor voting. The voting ended on February 26, 2013. On February 28, 2013, Elpida announced that the reorganization plan was approved by the statutorily required majority of the creditors and was also approved by the Tokyo District Court. In July 2013, Elpida was acquired by Micron and became a wholly-owned subsidiary of Micron.

Collaborative Development Agreement with Micron Technology

In April 2013, we entered into a CDP agreement with Micron to develop and improve certain advanced memory products (the Micron CDP). Upon the acquisition of Elpida by Micron in July 2013, our prior CDP with Elpida was terminated, and the exclusive licenses that we previously granted to Elpida under the Elpida CDP transferred to Micron.

Under the Micron CDP, we are providing development services to Micron and granted Micron non-exclusive licenses to our HPC technology for the purpose of developing and improving certain advanced memory products. The development activities will be conducted in at least two separate development programs, one in the field of DRAM, and the other in the field of non volatile memory. The period of development activities for each development program is at least two years. We own the rights for certain technology and IP arising out of the Micron CDP (Micron CDP IP),

with Micron owning the rights for certain other technology and IP arising out of the Micron CDP. We also granted Micron exclusive and non-exclusive licenses under our rights in the Micron CDP IP in certain fields. Micron has agreed to pay us annual recurring success fees for a fixed duration (Success Fees) in the event that Micron commercially produces wafers, at a certain rate of production, that incorporate certain deliverables we provide to Micron. Micron has also agreed to pay us (i) certain fees at a fixed rate for providing development services to Micron and (ii) certain expenses and material costs subject to pre-approval. Micron may grant sublicenses under the Micron CDP IP or the Elpida CDP IP to various third parties, but in certain circumstances Micron must share with us the licensing fees it receives from such sublicenses. We may also grant sublicenses within certain fields under the Micron CDP IP

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to third parties, but in certain circumstances we must share with Micron the licensing fees we receive from such sublicenses. The initial term of the Micron CDP is three (3) years. Any obligation of Micron to pay Success Fees under the Micron CDP may continue after the end of the development programs.

ATMI Engagement

In November 2006, we entered into an alliance agreement (the "Alliance Agreement") with ATMI to develop advanced materials for semiconductor products under one or more individual CDPs as agreed between the parties from time to time. Each CDP would provide payments from ATMI to us (i) for providing development services to ATMI, (ii) for subscription and license fees for use of the HPC platform, and (iii) for certain pre-approved expenses and material costs. ATMI owns any technology and IP that it independently creates during the Alliance Agreement. We own the technology and IP we independently create. Unless modified by the terms of a CDP, we also own the technology arising out of the CDP and the HPC technology. The initial term of the activities under the Alliance Agreement is ten years.

The parties have collaborated on one CDP under the Alliance Agreement. Under that CDP, ATMI owns any technology and IP that it independently creates during the Alliance Agreement, as well as any materials manufacturing technology and associated IP rights that are created during the course of the Alliance Agreement (the Alliance Materials Manufacturing Technology). We own the technology and IP we independently create and, other than the Alliance Materials Manufacturing Technology, any other technology and IP that is created during the course of the Alliance Agreement (the Alliance IP). We granted to ATMI a limited, field-restricted, exclusive license to use the Alliance IP, with the right to sublicense, and ATMI has agreed to pay us royalties or share revenues on the sales or licenses of ATMI products that incorporate the Alliance IP. We retained the right to be the sole licensor of any Alliance IP to any IC manufacturers or original equipment manufacturers.

In July 2007, we entered into a Wets Workflow Purchase Agreement with ATMI, which was extended and amended through amendments in December 2007, December 2008, March 2009, August 2010, March 2011, October 2011, December 2012 and March 2013 (as amended, the ATMI Wets Workflow Agreement). Pursuant to this agreement, we agreed to sell to ATMI certain HPC processing tools and license informatics software related to liquid or fluids-based materials (Wets) used in semiconductor processing and manufacturing (collectively, the Wets Workflow). The Wets Workflow may only be used at certain designated sites and solely for the purpose of developing and commercializing materials, Wets processing processes, products and materials manufacturing technologies in a certain field. The agreement generally provides that ATMI is obligated to pay us royalties on products that incorporate any material identified, first synthesized, or discovered through use of any Wets Workflow (the ATMI Wets Products). However, the parties have agreed that for 2013, ATMI would instead pay a fixed fee to us in exchange for subscription and license fees for use of the HPC platform and related software and any volume-based royalties on the sale of the ATMI Wets Products during 2013.

During the term of the agreement, we have agreed not to enter into any joint marketing, sales or development agreements in certain fields with certain competitors of ATMI. During the term of the agreement and subject to economic terms, we also agreed not to ship certain elements of the Wets Workflow and certain other proprietary HPC processing tools to certain ATMI competitors for use in certain defined fields. We have agreed to evaluate ATMI materials for CDPs between us and integrated device manufacturers for an IC or solar application. We have agreed to recommend ATMI materials to our customers in these CDPs, provided that the ATMI materials are timely available, meet our customers' requirements and are cost competitive. If we identify an opportunity for ATMI and us to work in a joint development program or if ATMI introduces us to such an opportunity with an integrated device manufacturer, we and ATMI will enter into good faith negotiations to agree on an economic arrangement, unless ATMI does not have HPC-related resources available to contribute to such an opportunity. In addition, we agreed to introduce one of ATMI's workflows to one of our other customers in exchange for ATMI committing to providing its support to such customer. We are required to dedicate certain resources to supporting ATMI's use of the Wets Workflow. The agreement will continue in effect as long as any license granted under any applicable purchase order under the agreement remains in effect

In December 2008, we entered into a Dry Workflow Purchase Agreement with ATMI, which was extended through amendments in August 2010, March 2011, October 2011, December 2012 and March 2013 (as amended, the ATMI

Dry Workflow Agreement). Pursuant to the agreement, we agreed to sell to ATMI certain HPC processing tools and license informatics software related to vapor-based applications (Dry) used in semiconductor processing and manufacturing (collectively, the Dry Workflow). The agreement generally provides that ATMI is obligated to pay us royalties on products that incorporate any compounds or materials (or composition of compounds or materials) identified, first synthesized, or discovered in whole or in part through the use of the Dry Workflow, and any derivative thereof (the ATMI Dry Products). However, the parties agreed that for 2013, ATMI would instead pay a fixed fee to us in exchange for subscription and license fees for use of the HPC platform and related software. This payment was in lieu of any volume-based royalties on the sale of ATMI Dry Products during 2013. We are required to dedicate certain resources to supporting ATMI's use of the Dry Workflow. In addition, we provided support from October 2011 to August 2012 to a customer of ATMI who was utilizing the Dry Workflow

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ATMI purchased from us. The agreement will continue in effect as long as any license granted under any applicable purchase order under the agreement remains in effect.

In December 2013, we amended the Alliance Agreement, the ATMI Wets Workflow Agreement and the Dry Workflow Agreement, effective January 1, 2014. Under this amendment, ATMI will resume owing us royalties based on sales of ATMI Wets Products and ATMI Dry Products developed using our HPC technology. As part of making such royalty payments, ATMI will make minimum quarterly payments during calendar year 2014. ATMI will also pay us fees to license certain installed tools that ATMI previously purchased from us, while not renewing licenses for certain other installed tools that ATMI previously purchased from us. This amendment also terminates those previously agreed-upon provisions which had restricted us from entering into joint marketing, sales or development agreements in certain fields with certain competitors of ATMI and from selling certain tools and related products to certain ATMI competitors for use in certain fields.

First Solar Collaborative Development Programs

In June 2012, we entered into a CDP agreement with First Solar (Initial CDP) to accelerate the efficiency of First Solar's cadmium-telluride (CdTe) thin-film photovoltaic (PV) manufacturing technology. Under the Initial CDP, we agreed to provide development services to First Solar and we granted First Solar non-exclusive use of our proprietary HPC platform (which includes a subscription to the platform and a license to the associated software). Each party owns the rights arising out of the Initial CDP technology solely created by its inventors. Rights arising out of the Initial CDP technology that was created jointly is jointly owned (all IP collectively is Initial CDP IP). The initial term for the development activities in the Initial CDP was six months. The Initial CDP gave First Solar an election, exercisable within 90 days after the end of the initial term, to purchase our rights to the jointly owned CDP IP as well as the CDP IP that was created and owned by us. First Solar elected to exercise this purchase right in October 2012 (after slightly more than four months of development activity) pursuant to an Asset Purchase Agreement in exchange for a one-time fee payable to us within 90 days of the signing of the Asset Purchase Agreement.

In December 2012, we entered into another CDP agreement with First Solar (Second CDP). Under the Second CDP, we are providing development services to First Solar using our proprietary HPC platform for the purpose of improving the efficiency of First Solar's CdTe PV cell-based solar panels. First Solar has agreed to pay us fees for (i) providing the development services, and (ii) certain pre-approved expenses and material costs. Each party will own the rights arising out of the Second CDP technology solely created by its inventors. Rights arising out of the Second CDP technology that is created jointly will be jointly owned (all IP collectively is Second CDP IP). To the extent that we are successful in improving the efficiency of First Solar's CdTe solar panels, we agreed to grant First Solar a royalty bearing license under our rights in the Second CDP IP to use such IP as necessary to manufacture and sell any improved solar panels. For certain other incremental technology developed by us under this CDP, First Solar has a right for a fixed period of time to purchase the technology for a fixed amount.

In February 2013, we entered into a Tool Purchase and Informatics License Agreement (the “Purchase Agreement”) with First Solar. Under the Purchase Agreement, First Solar will purchase certain equipment and we will grant First Solar non-exclusive licenses to our proprietary HPC platform and to our proprietary informatics software, for use solely with the purchased equipment for a fixed period. We will also provide warranty services on the equipment under the Purchase Agreement.

In connection with the signing of the Purchase Agreement, we also amended the Second CDP. The amendment modifies the fee terms in the Second CDP to reflect the purchase of equipment under the Purchase Agreement.

In April 2013, we again amended the Second CDP to modify timelines with respect to the provision of certain project deliverables. In December 2013, we further amended the Second CDP, extending the period of development activities through November 30, 2014, and agreeing with First Solar to reduce our obligation to provide full-time employees or contractors dedicated to development activities under the CDP, in return for reduced fees during calendar year 2014. The parties further agreed to modify the structure of royalties owed by First Solar to us, with First Solar agreeing to pay us royalties based on the sales of First Solar's CdTe solar panels that use CDP IP.

Guardian Collaborative Development Programs

We entered into our first CDP agreement with Guardian in February 2010 to collaborate on research and development tasks relating to liquid coatings for flat glass. We entered into our second CDP agreement with Guardian in July 2010

to collaborate on research and development tasks relating to sputtered coatings for flat glass.

Under the agreements, we are providing development services to Guardian and granted Guardian non-exclusive use of our proprietary HPC platform (which includes a subscription to the platform and a license to the associated

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software) for the purpose of developing and improving certain glass products. We own the rights for certain technology and IP arising out of the CDPs (CDP IP). Under the agreements, Guardian has the right to take either an exclusive or non-exclusive limited royalty-bearing license to the CDP IP owned by us. In either case, Guardian's obligation to pay royalties under the licenses granted by us will continue for the duration of the licenses. Exclusive licenses will be subject to certain minimum royalty payments. If Guardian elects to take a non-exclusive license, then we may be required to share with Guardian any licensing revenues we generate by granting licenses under our CDP IP to third parties.

Guardian has agreed to pay us royalties on sales of products covered by the licenses. In addition, during the development period, Guardian is paying us (i) fees for providing development services, (ii) subscription and license fees for use of the HPC platform, and (iii) certain pre-approved expenses and material costs.

In December 2013, we amended our two CDP agreements with Guardian to extend the period of development activities under these CDPs through January 31, 2014, with Guardian paying us the same monthly fee for our resources as previously agreed to by the parties. The parties further agreed in the amendment to negotiate the terms of an extension for both CDPs beyond January 31, 2014.

In February 2014, the parties agreed to further amend the two CDP agreements. Under this amendment, and effective January 31, 2014, development activities under the existing CDP agreements would be extended to January 31, 2017. During this extension period, we will provide Guardian with additional HPC technology and dedicated full-time employees (Resources) to support these continuing development activities, in exchange for additional monthly fees. Guardian also agreed to continue paying us specified royalties on sales of its products covered by the licenses we granted to them to the CDP IP, and also to pay a mutually agreed volume-based royalty when certain products include multiple elements of CDP IP. We have further agreed to share with Guardian a certain percentage of any royalties we receive from licensing to third parties certain CDP IP developed under the liquid coatings for flat glass CDP Agreement. Guardian may request us to increase the Resources, and on or after January 31, 2016, Guardian may request us to reduce the Resources. If the Resources are reduced, the monthly fees shall be proportionately reduced, but such reduction in fees will be offset by Guardian’s payment of the royalties owed to us under the CDP Agreements for the licenses granted by us to Guardian for the CDP IP. Otherwise, Guardian must pay to us the difference between the original fees and the reduced fees not covered by the owed royalties. This amendment also provides that Guardian shall also have certain early termination rights for years two and three of the extension period, subject to the payment of early termination fees. The licenses to CDP IP and Guardian’s royalty obligations shall survive the termination or expiration of this agreement.

Equipment Supply and Technology Licensing Agreements/Joint Development Program Agreement with UCTT

In September 2013, we entered into two Equipment Supply and Technology Licensing Agreements (the “Equipment Agreements”) and a Joint Development Program Agreement (the “JDP Agreement”) with UCTT to help UCTT establish a platform that accelerates the application of thin film coatings of various materials for industry. Under the Equipment Agreements, UCTT will purchase certain equipment from us, and we will grant UCTT non-exclusive licenses to our proprietary HPC technology and to our proprietary informatics software, for use solely with the purchased equipment and solely for the purpose of developing and commercializing materials and products incorporating such materials in the fields of glass coatings, photovoltaic devices, power electronics and displays (the “Field”), for a fixed period and, subject to payment of additional fees, for additional periods. We will also provide maintenance, support and warranty services on the equipment under the Equipment Agreements.

Under the JDP Agreement, UCTT will use the purchased equipment and assistance from our business and technical teams to engage in CDPs with third parties (“CDP Customers”). Such CDPs will provide R&D services and will sell or license intellectual property developed under the CDP to the CDP Customers in the Field. The profits earned by

UCTT from such R&D service fees and intellectual property license fees will be shared between us and UCTT depending on whether we brought UCTT that business and whether we will provide technical assistance to the CDP Customer. If UCTT wishes to sign CDPs with a party outside the Russian Federation ("Outside Third Parties"), it will need our prior written consent unless the Outside Third Party is named in an enumerated list agreed to by the parties, or has less than $50M in annual revenue in the Field, or is located in the Commonwealth of Independent States or, for CDPs in the field of glass coatings, is located in and has a majority of assets in the European Union. For a period of five (5) years, we have agreed to not enter into an arrangement in the field of glass coatings with a third party without the prior consent of UCTT if such arrangement will be similar in structure to this JDP Agreement.

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In connection with entering into these three arrangements, we have committed to provide certain operating expense funding for UCTT; and we have certain contingent revenue which is subject to an earn-out clause related to business development activities included in the JDP Agreement.

Corporate and Available Information

We were originally incorporated as The BEP Group, Inc. in Delaware in June 2004. In November 2004, we changed our name to Intermolecular, Inc. We are headquartered in San Jose, California.

Our Internet address is www.intermolecular.com. Information included on our website is not part of this Form 10-K. We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. See http://ir.intermolecular.com. In addition, copies of our annual reports are available free of charge upon written request. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is http://www.sec.gov/cgi-bin/browse-edgar.

ITEM 1A. RISK FACTORS

We describe our business risk factors below. You should carefully consider the risks described below together with the other information set forth in this Form 10-K, which could materially affect our business, financial condition or future results. The risks described below are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and operating results.

Risks Related to Our Business, Financial Condition and Results of Operations

We have a limited operating history, which makes it difficult for investors to evaluate our current business and future prospects.

We do not have a long history of operating results on which you can base your evaluation of our business. We are still proving our business model, and we have not yet demonstrated our ability to generate significant revenue, particularly licensing and royalty revenue (which represented 22%, 24%, and 27% of total revenue in fiscal years 2013, 2012 and 2011, respectively). As a result, it may be difficult for analysts and investors to evaluate our future prospects. If we do not generate significant licensing and royalty revenue, we may never achieve sustained profitability. Furthermore, because of our limited operating history and because the semiconductor and clean energy industries are rapidly evolving, we have limited experience in analyzing and understanding the trends that may emerge and affect our business. If we are unable to obtain significant licensing and royalty revenue from products that use or incorporate technology developed under our collaborative development programs ("CDPs"), our financial condition and results of operations would be materially and adversely affected.

Our operating results may fluctuate from quarter to quarter, which may make it difficult to predict our future performance.

Our revenue, expenses and operating results have fluctuated, and may in the future continue to fluctuate significantly from quarter to quarter due to a number of factors, many of which are outside our control. Factors that may contribute to these fluctuations include the following, as well as other factors described elsewhere in this Form 10-K:

- our dependence on a limited number of customers;
- the length of our sales cycles for CDPs, which makes it difficult to predict the timing of new or expanded CDPs;
- the length of our development cycles for CDPs, which makes it difficult to predict the timeframe in which technology developed under CDPs will be available for commercialization;

fluctuations in the volume and prices of products manufactured and sold by our customers that use or incorporate technology developed under our CDPs ("CDP Products") and that generate licensing and royalty revenue for us;

our revenue mix, which may vary from quarter to quarter as (i) we enter into new CDPs and related customer arrangements; (ii) existing CDPs, particularly for significant customers, are completed, extended, or undergo a change in scope; (iii) licensing arrangements take effect; (iv) we enter into product sale transactions and/or (v)

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we enter into IP sale transactions;

the highly cyclical nature of and price volatility in the semiconductor industry;

the financial stability of any of our customers;

the timing and extent to which we enter into new CDPs or complete, extend the duration, expand the scope or reduce the duration or scope of existing CDPs;

one-time offsets to revenue associated with the vesting of contingent warrants issued to two of our customers that are currently outstanding;

non-cash charges relating to stock-based compensation, amortization of intangible assets, write-down expenses related to inventory, and impairment expenses related to long-lived assets;

any involvement in significant litigation, and in particular intellectual property litigation;

any payments resulting from our intellectual property indemnification policies and obligations;

- any need for significant additional capital to finance our business;

- any delay in shipments caused by shortages of components used or incorporated in products sold into the market, design errors, manufacturing problems, or difficulties or delays gaining required export licenses for such products;

- warranty claims, product recalls and product liability for our HPC tools and for CDP Products; and

- business interruptions such as earthquakes and other natural disasters.

You should not rely on quarter-to-quarter comparisons to predict our future performance. Unfavorable changes in any of these or other factors may adversely affect our business, financial condition and results of operations.

We have incurred operating losses since our inception and may not be able to achieve or maintain sustained profitability.

We have generated net losses each year since our inception, including $8.8 million, $0.8 million, and $30.0 million for the fiscal years ended December 31, 2013, 2012 and 2011, respectively. Our accumulated deficit as of December 31, 2013 was $110.1 million. We will need to significantly increase revenue and operating margins (through greater licensing revenue and other mechanisms) to achieve sustained profitability, which we may not be able to accomplish.

Our ability to achieve and maintain profitability will depend, in large part, on our success in addressing the following four challenges, as well as the other risk factors in this Item 1A:

- We may be unable to achieve broad customer acceptance of our HPC platform and approach as an alternative to conventional research and development activities.

Historically, semiconductor companies have conducted R&D activities internally using conventional research methods, and they have vigorously protected the confidentiality of their R&D activities. In order for us to increase revenue, we must convince these companies that our technology and capabilities justify collaborating with us on their basic R&D programs. A significant cultural transition is required for a customer's internal R&D team to embrace us as

a collaborative partner. This contributes to the long sales cycles we experience, and may require us to make significant investments in the expansion of our sales and marketing efforts. We must also convince potential customers in the clean energy industry that our HPC platform and approach are useful tools in an emerging industry. We cannot assure you we will achieve the levels of customer acceptance necessary for us to maintain and grow a profitable business. Failure to achieve the necessary customer acceptance to extend or add current or new customer relationships would adversely affect our revenue and profitability.

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- We may be unable to successfully collaborate with all of our customers to achieve the technological innovations sought by our customers.

Even if we achieve sufficient levels of customer acceptance of our HPC platform as an effective tool for R&D, we will not achieve significant revenue or profitability from a CDP if a project to which we have devoted technology and significant resources fails to produce any measurable success or value to our customers in the form of differentiated technology and intellectual property. CDPs are extremely complex and time-consuming to implement and costly to maintain. We rely to some degree on the efforts and resources of the customer. Differences of opinion over the implementation and management of the program may occur, which could lead to material delays and/or a failure to achieve the successful development of technology. In addition, there are a limited number of CDPs to which we can commit our resources at any given time. For a variety of reasons, including but not limited to insufficient R&D budgets of our customers or us, we may fail to achieve the technological innovations sought by our customers in a reasonable amount of time or at all. We do not know whether our customers will have sufficient resources to maintain or increase the level of investment in R&D required for a successful CDP. If a customer reduces the scope of its CDP with us, it will result in a greater concentration of risk of success being placed upon the remaining scope of our engagement, and we cannot guarantee that the remaining scope of the engagement will lead to a successful result. If a CDP does not generate sufficient revenue to recover the upfront costs and cash we invested in the CDP, this would adversely affect our results of operations.

- Our customers may not be successful in commercializing products that use or incorporate technology and IP developed under our CDPs with them.

If we are successful in developing valuable technology for our customers, they still face significant challenges in commercializing products that use or incorporate such technology. The markets for products related to our engagements are intensely competitive and are characterized by rapid technological change. These changes result in frequent product introductions, short product life cycles and the necessity of continually increasing product capabilities. We cannot assure you that our customers will dedicate the resources necessary to successfully execute their business strategies for these products. Our customers are not contractually obligated to us to make or sell any CDP Products. They may not have the financial strength to cost-effectively manufacture the CDP Products at high volume and in quantities sufficient to meet demand, or the competitiveness to price, market and sell the CDP Products in intensely competitive markets. They may experience delays in shipments caused by shortages of components incorporated in the CDP Products, design errors or other manufacturing problems associated with the CDP Products. A decline in demand or average selling prices in the end markets for CDP Products could result in declining sales revenue for our customers and could adversely affect our business and results of operations. Any failure of a customer to achieve market success for CDP Products could also negatively affect such customer's willingness to work with us on other collaborations and could more generally harm our reputation and business prospects. Even if a customer is able to successfully commercialize a CDP Product, there may be a significant delay before we receive any licensing or royalty revenue due to the complexities inherent in production and manufacturing in our customers' target markets.

- Existing and potential customers may be resistant to paying license and royalty fees; and we may face challenges in monitoring and enforcing royalty agreements with existing customers.

Our royalty-bearing licenses with our customers lay the framework for ongoing royalty revenue from CDP Products. Although our R&D activities under CDPs generate revenue for us, in order to achieve profitability we must be able to structure, negotiate and enforce agreements for the calculation and payment of higher-margin license and royalty revenue. Unless we adequately demonstrate the value of our platform to our customers and potential customers, we may face resistance to structuring royalty arrangements in the future that are acceptable to us, or our customers and our potential customers may not agree to enter into royalty-bearing licenses with us at all.

If we are able to negotiate appropriate agreements, we will need to rely on our customers to make those payments on a timely basis. Licensing and royalty revenue we may receive in the future may be based on sales of CDP Products. In order to accurately report our financial results on a timely basis, we will need to receive timely, complete and accurate information from our customers regarding their sales and resulting payments they owe us. If the information that we receive is not timely, complete or accurate, we may not receive the full amount of revenue to which we are entitled under these arrangements on a timely basis, which could result in adjustments to our financial results in a future period. Although we typically have audit rights with these parties, performing this

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type of audit could be harmful to our collaborative relationships, expensive and time-consuming and may not be sufficient to reveal any discrepancies in a timeframe consistent with our financial reporting requirements.

If a project to which we have devoted technology and significant resources fails to produce any measurable success or value to our customer in the form of differentiated technology and intellectual property that our customer can successfully commercialize, we may not earn licensing and royalty revenue sufficient to recover our upfront investment in the CDP, which could adversely affect our revenue and profitability.

In some cases, the revenue we receive from our customers during the development stage is not sufficient for us to fully recover our costs and cash invested in HPC platforms dedicated to customer engagements, and our business model relies on licensing and royalty revenue based on the sales by our customers in the end-markets of CDP Products. Our CDPs involve complex R&D, and our ability to develop the differentiated technology and intellectual property sought by our customers is inherently uncertain and difficult to predict. If a project fails to produce any measurable value to a customer, or if we are otherwise not successful in maintaining and managing a CDP, we may not receive sufficient amounts of licensing and royalty revenue to recover our upfront investment in the CDP.

We depend on a limited number of customers, and a loss of any of them, or a significant reduction in revenue from any of them, would adversely affect our business, financial condition and results of operations.

Our customer base is highly concentrated. Revenue has historically come from a few customers, and we expect that revenue from a relatively small number of customers will continue to account for a high percentage of our revenue for the foreseeable future. Our four largest customers accounted for 55% of our revenue in the fiscal year ended December 31, 2013. Our three largest customers during 2012 and 2011 (all of which are in the semiconductor industry), accounted for 67% and 64% of our revenue in the fiscal years ended December 31, 2012 and 2011, respectively. Our largest customer accounted for 17%, 28%, and 29% of our revenue in each of these periods, respectively. Our concentration of customers is somewhat a reflection of the concentrated nature of manufacturers in the DRAM, flash memory and complex logic markets, and our revenue is and may continue to be heavily reliant on key high-volume customers. In addition, as with any of our customers, our profitability and success are dependent, in part, upon the receipt of licensing and royalty revenue on the sale of CDP Products by our customers, and we cannot control the timing of customer product introductions or their success or failure in the marketplace. The loss of any of these customers or a decrease or delay in the manufacturing or sales volumes of the CDP Products, or their failure to pay amounts due to us or renew, extend or maintain their existing relationships with us, and the related impact on our future anticipated licensing and royalty revenue, would materially and adversely affect our business, financial condition and results of operations, and we may not be able to replace the business from these customers. Additionally, any significant decrease in revenue from one or more key customers may require reductions in our employee workforce, which could reduce our ability to grow as well as expose us to an increased risk of employment and labor claims against us.

As an example, in February 2014 our customer GLOBALFOUNDRIES, Inc. ("GLOBALFOUNDRIES") suspended development activities under its CDP with us through the remainder of calendar year 2014. Accordingly, we have experienced a reduction in the scope of R&D activities, associated employee workforce and associated CDP revenue, which has adversely affected our business, financial condition and results of operations in the most recent fiscal quarter. Similarly, Toshiba and SanDisk have notified us that they do not desire to enter into a renewal or extension with us of the term of our CDP. From and after March 15, 2014, we will no longer provide services to Toshiba or SanDisk under the CDP, and Toshiba and SanDisk will no longer pay us fees for any further development services. In addition, our customer Elpida Memory, Inc. ("Elpida") filed for protection under the Corporate Reorganization Act in Japan in February 2012, and was subsequently acquired by Micron Technology, Inc. (“Micron”), a leading provider of memory chips, in July, 2013. Future filings for bankruptcy protection by existing customers or further consolidation among existing or potential customers may increase our dependence on a limited number of customers, which would

subject us to additional risk for the reasons set forth above.

Our sales cycles are long, and we commit significant resources to a project before we have any commitment that a potential customer may agree to use our platform or service. One or more failures to enter into a CDP after we have devoted significant resources to a project could adversely affect our business, financial condition and results of operations.

Our sales efforts require us to educate our potential customers about the benefits of our solutions, which often requires significant time and expense, including a significant amount of our senior management's time and effort. Our sales cycles to date have typically ranged from 9 to 24 months and may be even longer in the future. Furthermore, we need to target those individuals within a customer's organization who have overall responsibility for the profitability of their products. These

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individuals tend to be senior management or executive officers. We may face difficulty identifying and establishing contact with these individuals. In addition, our customers' technology and product pipelines are highly confidential and they may choose to withhold certain information from us during the sales cycle to protect their own proprietary technology. Our ability to implement our HPC platform and methodology is heavily dependent upon the information provided to us by our customers. If our customers reveal the complexities of their specifications after we enter into a CDP with them, that complexity may cause delays unanticipated at the time we entered into the program. During our sales cycles, we incur significant expenses and, in many cases, may begin to build new systems, configure, modify, expand or customize existing systems, develop software and design workflows to meet our customers' requirements prior to obtaining contractual commitments, without any assurance of resulting revenue. Where a potential customer engagement requires a new dedicated HPC platform, we may invest in new capacity ahead of a customer commitment. Our cycles to build, configure, modify, expand or customize the HPC platform to date have ranged from three to nine months and may be even longer in the future. Investment of time and expense in a particular customer engagement that does not ultimately result in material revenue will adversely affect our revenue and other results of operations. Other factors impacting the length of our sales cycles include, but are not limited to, the following:

- the limited number of customers that are appropriate sales targets for our platform and that are willing to enter into licensing agreements with us;
- our ability to enter into CDPs with customers who are or will become market leaders in larger, growing market segments;
- our customers' budgetary constraints and internal review procedures that must be completed to begin collaboration with us, including but not limited to those customers whose R&D expenditure and product purchasing decisions are impacted by potential delays in or cancellation of funding by governmental agencies; and
- the significant cultural transition required for a customer's internal R&D team to embrace us as a collaborative partner.

Semiconductor industry technology is rapidly changing. If we are unable to anticipate trends in technology development and introduce new technologies reflecting the latest innovations, it could adversely affect our business, financial condition and results of operations.

Our customers expect us to be continuously innovative in their sectors and expect that the technology developed under our CDPs will help them develop new products that keep pace with or push the limits of technological innovation. We rely heavily on the judgment of our management and advisers to anticipate the technology trends in the semiconductor industry and we must continually devote significant engineering resources to keep up with the rapidly growing and evolving varieties of semiconductor architecture, materials, applications, processes and equipment used in semiconductor design and manufacturing. In particular, we must be prepared for the cost, technical complexity and timing of a proposed industry transition from 300mm to 450mm wafers, as well as the possible industry transition to the use of extreme ultraviolet (EUV) lithography.

These innovations are inherently complex and require long development cycles. If we are not able to accurately predict industry changes, or if we are unable to adapt our HPC platform to meet our customers' needs on a timely basis, our existing solutions will be rendered obsolete and our existing and potential customers may choose to develop their own solutions internally as an alternative to ours. If we lose customers, it could have a material adverse impact on our results of operations.

The semiconductor industry is highly cyclical, subject to significant downturns, price volatility, and other dynamics that make the industry very unpredictable. These factors can have a material adverse impact on our business both

directly, and indirectly through the impact on our customers in the industry.

The semiconductor industry is highly cyclical and has been subject to significant economic downturns at various times, characterized by diminished product demand, accelerated erosion of average selling prices and production overcapacity. The semiconductor industry also periodically experiences increased demand and production capacity constraints. The timing and length of these cycles is extremely difficult to predict, which makes it challenging for us to forecast our operating results, make business decisions and identify risks that may affect our business, financial condition and results of operations. In addition, the semiconductor industry has historically experienced price volatility. Because the substantial majority of our revenue comes from customers in semiconductor industry, we may experience significant fluctuations in operating results due to the cyclicality and price volatility of the industry.

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The industry has also been affected in recent years by uncertainty in the credit markets. For example, pressures in the DRAM sector caused financial difficulties for our customer, Elpida, before it was acquired by Micron. In addition, future uncertainty may cause sudden changes in our customers' manufacturing capacity requirements and spending, which depend in part on capacity utilization, demand for products using or incorporating our technology by consumers, inventory levels relative to demand, and access to affordable capital.

Industry consolidation (including but not limited to consolidation of semiconductor manufacturing towards foundries and large-scale manufacturers, and the subsequent concentration of research and innovation in manufacturing process development) has increased in recent years, and we may continue to see consolidation in the future. This will likely result in a smaller number of companies, but more large companies with greater financial resources - companies that may be less likely to become our customers than smaller companies with more limited R&D resources. Furthermore, if any of our existing customers is acquired, the acquiror may not continue to engage in a CDP with us or may choose to focus its product development and commercialization on technologies not covered by our CDP.

The clean energy sector includes a number of industries that are in a very early stage of development, each of which may experience economic challenges. As a result, we may not earn significant revenue from our initiatives in these industries for an extended period.

The clean energy industry is comprised of several sectors including energy-efficient glass, solar cells, light emitting diodes ("LEDs"), flat-panel displays, advanced batteries and other energy-efficiency technologies. Most sectors of the clean energy industry are in the very early stages of development. Many of the associated technologies have not yet achieved commercial viability in comparison to available alternatives, and may never achieve widespread market adoption. Many of the associated technologies will require substantial investments of capital to achieve scale, which may not be available on attractive terms, if at all. Certain technologies may depend on government subsidies to be commercially viable, and those subsidies may not be available from federal and state governments facing increasing financial constraints. If sectors of the clean energy industry take an extended period to achieve market acceptance, and to garner significant revenue, we may not earn material revenue from our initiatives in this area until market acceptance, if ever. Furthermore, it may be difficult for us to predict which clean energy companies and which technologies may become market leaders, and we may invest time and resources in collaborations with companies who are ultimately unsuccessful in the clean energy industry, which could adversely affect our operating results.

The clean energy industry may again experience a challenging environment as it has in the recent past. The demand for clean energy products is also influenced by macroeconomic factors such as global economic conditions. A global economic downturn that affects the availability of financing can slow enterprise clean energy projects; it can also affect individual customers, who may be reluctant to assume high up-front costs and will have more difficulty getting access to capital to cover those costs. Any negative market and industry trends in the clean energy industry could materially and adversely affect our existing and potential customers in the clean energy segment and ultimately have a negative impact on our clean energy business.

If a project to which we have devoted technology and significant resources fails to produce any measurable success or value to our customers in the form of differentiated technology and intellectual property that they may use in their products, we may not receive meaningful amounts of, or any, licensing and royalty revenue. In this case, we may not recover the upfront costs and cash invested in the CDP, which could adversely affect our results of operations. In addition, even if we successfully develop differentiated technology and intellectual property under a CDP that our customer is able to commercialize, there may be a significant delay before we receive any licensing or royalty revenue due to the complexities inherent in production and manufacturing in our target markets.

If we are unable to scale our development services to accommodate a greater volume of CDPs, our growth prospects would be limited and our business, financial condition and results could be adversely affected.

Our customers require a significant amount of individualized attention and many of our customers also require dedicated lab space at our facilities for CDPs. We have limited space and internal capacity, both in terms of personnel as well as capital equipment resources, to meet these types of demands for our customers. In addition, because of the significant confidentiality concerns associated with the projects and products we work on and the restrictions on resource and information sharing we have implemented in response, we are not able to fully capitalize upon economies of scale. If the demand for our services and products exceeds our capacity to meet such demand, we may be required to turn down potential opportunities, which would cause us to lose potential revenue, and our potential customers may take their business to a competitor or decide

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to develop or expand internal R&D capabilities. If we are unable to scale our development services to meet demand, our growth may be hindered and our business and operating results could be adversely affected.

We may be unable to make the substantial R&D investments required to remain competitive in our business.

The semiconductor and clean energy industries require substantial investment in R&D to develop and bring to market new and enhanced technologies and products. To remain competitive, we anticipate that we will need to increase our levels of R&D expenditures to keep pace with the development efforts of our customers. We are continually working to develop and broaden our HPC platform, including our software and informatics capabilities, to address a wider range of markets and customers for multiple applications within semiconductors, flat glass, solar cells, LEDs, flat-panel displays, advanced batteries and other energy-efficiency technologies. This is an extremely complex and costly process. We expect R&D expenses to increase in absolute dollars for the foreseeable future, due to the increasing complexity and number of platforms and solutions we plan to develop both for our customers and internally, the expansion of our customer base and any associated increase in upfront R&D costs.

Although we are making progress in certain areas, we have limited expertise and experience in other fields. We may be required to invest significantly greater resources than anticipated in our R&D efforts. If we are unable to build new systems, or configure, modify, expand or customize existing systems for these applications and develop our expertise to support these fields, our business growth might be limited, and our business and results of operations could be materially and adversely affected.

Our strategy includes conducting proprietary R&D efforts in collaboration with and on behalf of multiple customers. Any failure on our part to adequately protect against potential conflicts of interest and breaches of confidentiality by us would harm our reputation and our relationships with our customers, and our business prospects and operating results would be materially and adversely affected. Moreover, some customers may hesitate to grant us access to their proprietary information, which could impair our ability to provide value for such customers.

Our strategy includes conducting proprietary R&D efforts in collaboration with and on behalf of customers who in some cases may have overlapping interests and technologies. We seek to structure our collaborative agreements and business practices to minimize any potential conflicts among customers and the possibility of any breaches of confidentiality. We may need access to some of our customers' proprietary information, and they may be reluctant to share it with us because of the risk of a potential conflict between us and/or our customers and other potential customers and the risk of a breach of confidentiality. In an effort to address these significant potential conflicts of interest and confidentiality concerns, we have implemented internal restrictions on resource and information sharing. However, we cannot ensure that our customers will perceive these measures to be adequate and effective, or that they will be, in all circumstances. Our failure to adequately and effectively address these concerns could result in our inability to attract new customers or retain existing customers, or lead to our having incomplete information with respect to existing customers that could impair our ability to fully address the customers' needs and demonstrate the value of our technology to the customers. Even though we make significant efforts to isolate each development activity from other development activities, we may fail to meet our contractual confidentiality commitments to one or more customers. Moreover, even if we meet these commitments, conflicts of interest between a customer and us, or between or among customers, could nevertheless arise. In either event, we may become involved in a dispute with our customers regarding the solutions developed during the collaboration or the rights to these solutions, including possible litigation. Disputes of this nature could harm the relationship between us and our customers, have a material adverse effect on our ability to enter into new CDPs and cause our revenue and operating results to decline significantly.

Our business strategy requires us to evaluate, integrate and develop elements of our customers' value chains, including development and manufacturing processes. Our ability to evaluate these effectively may sometimes depend on the

cooperation from our customers' materials suppliers and equipment manufacturers as well as access to their data and tools. If these third parties do not cooperate with us or provide us access to the necessary data, materials, tools or equipment, we may not be able to deliver effective solutions to our customers, which would adversely affect our business and results of operations.

We have to evaluate multiple elements of our customers' value chains to help them test and develop end products that meet their specifications, including the materials, tools and equipment used by them during the manufacturing process. Our ability to evaluate a customer's value chain effectively may sometimes depend on cooperation from such customer's materials suppliers and equipment manufacturers and on access to their data and tools. Our evaluation of the materials and equipment in the value chain must be unbiased to maintain credibility with our customers, and our evaluation sometimes results in

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recommendations that our customers change materials and tools providers or equipment manufacturers. Our recommendations may negatively impact our relationships with materials and tools providers and equipment manufacturers. Tensions in our relationships with these providers and manufacturers may cause these parties to limit or deny our access to their newest materials and equipment, which would in turn limit our ability to complete our development activities with our customers or control the quality of the combinatorial methods applied to our development efforts on their behalf, which would adversely affect our business and operations.

Failure of our suppliers to timely deliver sufficient quantities of the components or materials that we use in our collaborations may result in delays or other disruptions in executing our CDPs, which could adversely affect our business, financial condition and results of operations.

We have historically relied on a small number of contract manufacturing companies for the manufacture and assembly of a majority of our HPC tools. While we are not dependent on any single contract manufacturing company, key parts of our tools are currently available only from a limited number of sources. In addition, components of our capital equipment are available from only a few suppliers. If supplies from these vendors are delayed or interrupted for any reason, we may not be able to get equipment or components for our tools or our own research efforts in a timely fashion or in sufficient quantities or under acceptable terms, if at all. Even though alternative sources of supply would be available, it could be time-consuming and expensive for us to qualify new vendors and work with them to integrate our designs into the tools they manufacture for us. In addition, we depend upon our vendors to provide components of appropriate quality and reliability. Consequently, if supplies from these vendors were delayed or interrupted for any reason, it could materially and adversely affect our business.

Our future growth may present challenges to our management and administrative systems and resources, which could adversely affect our business, financial condition and results of operations.

In order to successfully expand our business we will need to continue to grow in all operational areas and to successfully integrate new employees. In particular, we expect continued growth as we expand our R&D capacity for current and additional CDPs. The expansion of our business may place a strain on our management, as well as our operational systems and facilities, which may make it difficult for us to implement our business strategy. We have experienced employment and labor claims against us by our employees in the past, and we may experience such claims in the future.For example, on August 23, 2013, we received a copy of a complaint from the California Division of Labor Standards and Enforcement filed by an employee claiming that the employee is owed back pay due to an incorrect classification as an exempt employee for overtime purposes. Subsequently, we were informed of similar claims by fourteen other current and former employees and contractors. On January 16, 2014, we participated in a mediation with the attorney who represents these fifteen claimants. This mediation did not result in a settlement of the subject claims, and on February 18, 2014, the claimants filed a lawsuit against us in the United States District Court for the Northern District of California. The addition of new employees may also increase the likelihood of employment and labor claims against us.

To effectively manage our operations and growth, we must continue to expend funds to enhance our operational, legal, financial and management controls, reporting systems and procedures, and to attract and retain sufficient numbers of talented employees. If we are unable to implement these enhancements efficiently, effectively and quickly, we will not be able to successfully grow our business as planned. Our future operating results will also depend on our management's ability to:

- improve our R&D efforts;

- improve our sales, marketing and customer support programs;

- enhance our operational and financial control systems;

- expand, train and manage our employee base and promptly replace departing employees with key skills; and

- effectively address new issues related to our growth as they arise.

We may not manage our expansion successfully, which could materially and adversely affect our business, financial condition and results of operations.

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Acquisitions, strategic investments or joint ventures may harm our business and operating results, cause us to incur debt or assume contingent liabilities, or dilute our stockholders.

We have made and may in the future make strategic investments or acquisitions or enter into joint ventures with third parties where there is an opportunity to expand the potential applications and reach of our capabilities, including our HPC platform. Exploring and implementing any investments, acquisitions or joint ventures may place strain upon our ability to manage our future growth and may divert management attention from our core businesses. There are also other risks associated with this strategy. We cannot assure you that we will be able to make investments or acquire businesses on satisfactory terms, that any business acquired by us or in which we invest will be integrated successfully into our operations or be able to operate profitably, or that we will be able to realize any expected growth, synergies or benefits from such investments, acquisitions or joint ventures. Our relative inexperience in effecting such transactions heightens these risks. In addition, to finance any acquisitions, investments or joint ventures, we may utilize our existing funds, or might need to raise additional funds through public or private equity or debt financings. We may be unable to obtain financing to fund future acquisitions or investments on attractive terms, or at all. Additionally, equity financings may result in dilution to our stockholders. We cannot predict the number, timing or size of investments, acquisitions or joint ventures, or the effect that any such transactions might have on our operating results.

Our financial obligation to Silicon Valley Bank (“SVB”) could adversely affect our financial health and our ability to raise additional capital to fund our operations and limit our ability to react to changes in the economy or our industry.

On May 31, 2013, we entered into a loan and security agreement (“Loan Agreement”) with SVB pursuant to which SVB made available to us loans under a revolving line to refinance existing indebtedness (including the repayment of all remaining principal and accrued interest under the secured promissory note that we issued to Symyx Technologies, Inc. in November 2011) and for working capital and general business purposes, in a principal amount of up to $26.5 million. Under the Loan Agreement, SVB funded an initial credit extension in the principal amount of $25.0 million on May 31, 2013.

On November 29, 2013, we elected to convert the entire $25.0 million of outstanding advances under the Loan Agreement into a term loan, as provided by the Loan Agreement. We are obligated to pay interest at the applicable rate and $0.5 million of principal on a quarterly basis. The term loan is scheduled to mature on November 30, 2016, at which time we would be obliged to pay all outstanding principal and accrued and unpaid interest on that date. At our option, we may prepay the outstanding principal balance of the term loan in full or in part, subject to a pre-payment fee of 0.25% of the outstanding principal balance of the term loan if the term loan is outstanding for less than one year. During the fiscal year ended December 31, 2013, we paid SVB $0.4 million of interest under the Loan Agreement.

Our obligations to SVB will require us to dedicate a substantial portion of our cash flow from operations to payments on interest and principal, thus reducing the availability of our cash flow to fund working capital, capital expenditures, research and development efforts, execution of our business strategy and other general corporate purposes. Such limitations increase our vulnerability to adverse general economic and industry conditions and limit our flexibility in planning for, or reacting to, changes in the economy, our industry and new opportunities that may arise. In addition, we granted SVB a security interest in substantially all of our assets, excluding all intellectual property. Under the Loan Agreement, we cannot grant an interest in our intellectual property to any other person. We are also subject to certain affirmative and negative covenants under the Loan Agreement, including limitations on our ability to: undergo certain change of control events; dispose of our assets; merge or acquire other entities; create, incur, assume, guarantee or be liable with respect to indebtedness; grant liens on any assets; make any dividends in cash; and make or permit any payment on subordinated debt, in each case subject to certain exceptions. In addition, we are subject to a financial covenant under which, if our unrestricted cash, cash equivalents and other short-term investments are less than $60 million, we must maintain a ratio of our short-term assets (including cash, net accounts receivable and

short-term investments) to certain liabilities (including our outstanding and owed obligations to SVB and any other liabilities maturing in less than one year) of 1.5:1.0. Under the Loan Agreement, subject to certain exceptions, we are also required to maintain with SVB our primary operating and other deposit accounts and securities accounts. The Loan Agreement also includes several potential events of default such as payment default, material adverse change conditions and insolvency conditions that could cause interest to be charged at the rate that is otherwise applicable plus 5.0%. Any uncured events of default may result in SVB's right to declare all outstanding obligations immediately due and payable and to exercise any other remedies permitted under the Loan Agreement. These obligations and restrictions may make it more difficult for us to borrow funds in the future to fund working capital, capital expenditures and other purposes, which could materially and adversely affect our business, financial condition and results of operations.

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We may need additional capital in the future to finance our business.

Our future capital requirements may be substantial as we continue to develop our business and expand our collaborative development efforts. Although we believe that, based on our current level of operations and anticipated growth, our existing cash, cash equivalents and marketable securities, as well as our access to capital pursuant to the Loan Agreement with SVB, will provide adequate funds for ongoing operations, planned capital expenditures and working capital requirements for at least the next 12 months, we may need additional capital if our current plans and assumptions change. In particular we may be required to raise additional capital if we choose to expand our business through strategic investments or acquisitions. Our need for additional capital will depend on many factors, including our rate of revenue growth, our expansion of our sales and marketing activities and overhead expenses, the timing and extent of our spending to support our R&D efforts and our ability to expand CDPs in the semiconductor and clean energy industries, whether we are successful in obtaining anticipated levels of payments from customers, the financial stability of our customers, whether we can enter into additional collaborations in our target industries and markets, the progress and scope of collaborative R&D projects performed by us and our customers, the effect of any acquisitions of other businesses or technologies that we may make in the future, the filing, prosecution, maintenance and enforcement of patent claims, how much we need to develop or enhance our solutions or HPC platform and any necessary responses to competitive pressures.

If our capital resources are insufficient to meet our capital requirements, and our revenue is insufficient to support any of these activities, then we will have to raise additional funds. If future financings involve the issuance of equity securities, our then-existing stockholders may suffer dilution. If we raise additional future debt financing, we may be subject to restrictive covenants similar or more restrictive than those we are subject to under the Loan Agreement with SVB, which would further limit our ability to conduct our business. We may not be able to raise sufficient funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop products or technologies or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate R&D programs, curtail or cease operations, obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we may not be able to successfully execute our business plan or continue our business.

If we lose one or more of our key personnel without obtaining adequate replacements in a timely manner, or if we are unable to retain and recruit skilled personnel, our operations could become disrupted and the growth of our business could be delayed or restricted.

Our success depends, in large part, on the continued contributions of our senior management team, in particular, the services of Mr. David Lazovsky, our President and Chief Executive Officer, and Dr. Tony Chiang, our Chief Technology Officer. If we lose the services of Mr. Lazovsky or Dr. Chiang, it could slow the execution of our business plan, hinder our development processes and impair our sales efforts, and searching for a replacement could divert our other senior management's time and increase our operating expenses. In addition, our customers could become concerned about our future strategy and operations, which could harm our reputation.

None of our senior management is bound by written employment contracts to remain with us for a specified period. The loss of any of our senior management could harm our ability to implement our business strategy and respond to the rapidly changing market conditions in which we operate. Upon hiring or promotion, new senior management personnel must spend a significant amount of time learning our technology, business model and management systems and their new roles, in addition to performing their regular duties. Accordingly, until new senior personnel become familiar with our technology, business model and systems or with their new roles, we may experience disruption to our ongoing operations. Moreover, the loss of a member of our senior management or our professional staff would require the remaining management to divert attention to seeking a replacement.

Our future success and competitiveness depends on our ability to retain and motivate our unique team of highly skilled scientists and engineers, and to recruit and hire similarly qualified replacements for any who leave the company. These scientists and engineers have expertise across various disciplines, fields and technologies, including engineering, materials science, process development and integration, equipment, device process technologies and device integration. In addition, as we grow, we will have to continue to retain, attract and motivate qualified and talented personnel, including our scientists and engineers, management, sales and marketing and legal and finance personnel. Because our CDPs are customer-specific and project-specific and last for a significant period of time, the loss of key scientists or engineers or other personnel could have an adverse effect on a particular CDP and on our ability to deliver results to a customer in a timely manner or at all. We do not know whether we will be able to retain all of these employees or hire appropriate replacements for any who leave the

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company, as we continue to pursue our business strategy. Competition for personnel is intense in the semiconductor and clean energy industries.

We may encounter difficulties in hiring qualified scientists and engineers because there is a limited pool of scientists and engineers with the specialized expertise required to understand and implement our platform in conjunction with our customers. Further, we may have difficulty or delays in obtaining deemed export licenses for some scientists and engineers who we may wish to hire, in obtaining visas permitting entry for some of our employees who are foreign nationals into the United States, and in obtaining visas permitting entry into other key countries for several of our key personnel, which could disrupt our ability to strategically locate our personnel. The loss of the services of key employees or our inability to retain, attract and motivate qualified scientists and engineers could have a material adverse effect on our business, financial condition and results of operations.

If we cannot compete successfully in our industry, our results of operations and financial condition would be adversely affected.

Competition in our markets may intensify in the future, which could slow our ability to grow or execute our strategy and could lead to increased pricing pressure, negatively impacting our revenue and ability to attain and maintain profitability. Our current and potential customers may choose to develop their own methods to accelerate R&D activities, including their own combinatorial development methods internally, particularly if we are slow in developing or deploying our solutions or improving them to meet market needs. We currently face indirect competition from the internal R&D groups of our current and potential customers, particularly those of our customers who work with us to develop knowledge of combinatorial methods and who may then use our methods independently. Several of them also design, develop, manufacture and market semiconductor and clean energy products based on their own solutions or other architectures and develop their own intellectual property internally. They often compete with each other and with us in various applications. Our customers are generally much larger and have significantly greater resources than us. We also face indirect competition from university collaborations, consortia and alliance partnerships. In addition, there may be other providers of high-throughput or combinatorial solutions for the design of and accelerating R&D relating to integrated devices of which we are not aware and there may be new entrants to the industry in the future, particularly if acceptance of these solutions grows. In addition, we believe that the demand for solutions that address the need for better integration between the design and manufacturing processes may encourage direct competitors to enter into our market. Other potential competitors include fabrication facilities that may decide to offer solutions competitive with ours as part of their value proposition to their customers. If these potential competitors change the pricing environment or are able to attract industry partners or customers faster than we can, we may not be able to grow and execute our strategy as quickly or at all.

A substantial portion of our revenue is derived from business arrangements with related parties, and such arrangements could create conflicts of interest that could adversely affect our business and results of operations.

Some of our customers and other business partners hold a significant stake in our capital stock. Related party transactions disclosed in our financial statements accounted for $12.8 million (19.0%) of our revenue in the year ended December 31, 2013 and $21.1 million (31.6%) and $21.0 million (39.0%) of our revenue for the years ended December 31, 2012 and 2011, respectively. ATMI, which beneficially owned approximately 5.6% of our outstanding stock as of December 31, 2013, accounted for $8.4 million (12.5%) of our revenue during the year ended December 31, 2013 and $16.5 million (24.7%) and $15.8 million (29.3%) of our revenue for years ended December 31, 2012 and 2011, respectively. For more information about these transactions, see Note 11 to our consolidated financial statements in this Form 10-K.

We believe that the transactions and agreements that we have entered into with related parties are on terms that are at least as favorable as could reasonably have been obtained at such time from unrelated third parties. However, these

relationships could create, or appear to create, potential conflicts of interest when our board of directors is faced with decisions that could have different implications for us and our related parties or their affiliates. In addition, conflicts of interest may arise between us and our related parties and their affiliates. The appearance of conflicts, even if such conflicts do not materialize, might adversely affect the public's perception of us, as well as our relationship with other companies and our ability to enter into new relationships in the future, including new CDPs with competitors of such related parties, which could have a material adverse effect on our ability to do business.

We may be subject to warranty claims, product recalls and product liability.

From time to time, we may be subject to warranty or product liability claims relating to our HPC tools that could result in unanticipated expenses as we compensate affected customers for product quality issues. Although we maintain

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product liability insurance, the insurance is subject to significant deductibles and there is no guarantee that coverage will be available or adequate to protect against all such claims. Alternatively, we may elect to self-insure with respect to certain matters. If an HPC tool sold to our customers is recalled, we may incur repair, return and/or replacement costs, contract damage claims from our customers and reputational harm. Costs or payments made in connection with warranty and product liability claims and product recalls could materially and adversely affect our financial condition and results of operations.

Our inability to effectively manage our inventory could adversely affect our revenue and profitability.

Our CDPs generally consist of our provision of services to our customers, our licensing to customers of IP related to the CDP, and the sale of specialized tools to customers with which CDP activities are undertaken. For these specialized tools, we typically plan production and inventory levels based on internal forecasts of customer demand. These forecasts can be highly unpredictable and can fluctuate substantially, which could lead to excess inventory write-downs and resulting negative impacts on revenue and profitability. In addition, innovation in our industry, or the use of R&D methodologies other than our HPC technology, could render significant portions of our inventory obsolete. If we overestimate our customers' requirements, we may have excess inventory, which could lead to obsolete inventory and unexpected costs. Conversely, if we underestimate our customers' requirements, we may have inadequate inventory, which could lead to foregone revenue opportunities, loss of potential market share and damage to customer relationships as product deliveries may not be made on a timely basis, disrupting our customers' CDP activity schedules. Additionally, our estimates of excess and obsolete inventory may prove to be inaccurate, in which case the provision required for excess and obsolete inventory may be understated or overstated. Although we make every effort to ensure the accuracy of our forecasts of future product demand, any significant unanticipated change in demand or technological developments could have a significant impact on the value of our inventory and operating results.

Compliance with environmental, health and safety laws and regulations could increase costs or cause us to incur substantial liabilities.

We are subject to various foreign, federal, state and local environmental laws and regulations governing, among other matters, emissions and discharges of hazardous materials into the air and water, the use, generation, storage, handling, transportation and disposal of, and exposure to, hazardous materials and wastes, remediation of contamination and employee health and safety. In addition, under certain of these environmental laws, liability can be joint and several and without regard to comparative fault. Our operations involve the use of hazardous materials and produce hazardous waste, and we could become liable for any injury or contamination that could arise due to such use or disposal of these materials. Failure to comply with environmental laws and regulations could result in the imposition of substantial civil and criminal fines and sanctions, could require operational changes or limits or the installation of costly equipment or otherwise lead to third party claims. Future environmental laws and regulations, stricter enforcement of existing laws and regulations, or the discovery of previously unknown contamination or violations of such laws and regulations could require us to incur costs or become the basis for new or increased liabilities, which could impair our operations and adversely affect our business and results of operations.

Global or regional economic, political and social conditions could adversely affect our business, financial condition and results of operations.

We operate in multiple jurisdictions throughout the world and are subject to foreign business, political and economic risks. In particular, we are subject to risks arising from adverse changes in global economic conditions. Global economic uncertainties in the key markets of many of our customers may cause our customers to delay or reduce R&D and technology purchases and investments. The impact of this on us is difficult to predict, but if businesses defer using our HPC platform or licensing our technology, require fewer CDPs or development tools, or if consumers defer

purchases of new products that use or incorporate technology developed under our CDPs, our revenue could decline. A decline in revenue would have an adverse effect on our results of operations and our financial condition.

In addition, some of our largest customers are located outside of the United States, primarily in Asia, which further exposes us to foreign risks. Also, a substantial portion of the consumer products market that serves as the end-market for the products we help our customers to develop is located in Asia. As a result, our operations are subject to substantial influence by political and economic conditions. Reduced end user demand as well as disruptions to the supply chain for our customers resulting from these or other events could lead to a reduction in our revenue and an adverse impact on our financial condition. Our licensing and royalty revenue is derived from sales of products that use or incorporate technology developed under our CDPs. To the extent that sales for these products are denominated in U.S. dollars, the currency conversion and foreign exchange laws and regulations in the foreign countries in which we do business may delay or preclude us from receiving payment from our customers, which would have an adverse impact on our operations and financial condition. Additionally, to

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the extent that sales for these customer products are denominated in a foreign currency, an increase in the value of the U.S. dollar relative to such foreign currencies could also adversely affect our licensing and royalty revenue irrespective of the volume of such products sold, which could adversely affect our business and operating results.

We derive a significant portion of our revenue from customers in foreign countries. We expect that a significant portion of our total future revenue will continue to be derived from companies based in foreign countries. If the U.S. dollar increases in value relative to the currencies in any of these countries, the cost of our CDPs, which have historically been billed in U.S. dollars, will be more expensive to existing and potential customers in those countries, which could adversely affect our ability to generate new or expand existing CDPs.

We are also subject to general geopolitical risks in connection with international operations, such as political, social, and economic instability, terrorism, interference with information or communication of networks or systems, potential hostilities, changes in diplomatic and trade relationships, and disease outbreaks, and any disruptive effect these events would have on our business operations. Although to date we have not experienced any material adverse effect on our operations as a result of these types of factors, we cannot assure investors that these factors will not have a material adverse effect on our business, financial condition, and operating results or require us to modify our current business practices. Inconsistencies among, and unexpected changes in, a wide variety of foreign laws and regulatory environments with which we are not familiar, including, among other issues, with respect to employees, currency controls, foreign exchange, protection of our intellectual property, and a wide variety of operational regulations and trade and export controls under domestic, foreign, and international law may also have unexpected, adverse impacts on our operations and financial condition.

Business interruptions could delay or prevent our business activities, which could have a material adverse effect on our business, financial condition and results of operations.

Our headquarters are located in the San Francisco Bay Area near known earthquake fault zones and are vulnerable to significant damage from earthquakes. We are also vulnerable to other types of natural disasters and other events that could disrupt our operations, such as cybersecurity breaches, terrorist acts and other events that may be beyond our control. We do not carry insurance for earthquakes and we may not carry sufficient business interruption insurance to compensate us for losses that may occur. Our business can also be impacted if our customers experience business interruptions as a result of events such as the 2011 earthquake and tsunami in Japan. Any losses or damages we or our customers incur could have a material adverse effect on our cash flows and success as an overall business.

Our ability to use our net operating loss carryforwards to offset future taxable income, and our ability to use our tax credit carryforwards, may be subject to certain limitations.

In general, a corporation that undergoes an “ownership change” under Section 382 of the Internal Revenue Code is subject to limitations on its ability to utilize its pre-change net operating loss carryforwards ("NOLs") to offset future taxable income and its ability to utilize tax credit carryforwards. As of December 31, 2013, we reported U.S. federal NOLs in the amount of approximately $52.0 million. In general, an “ownership change” occurs if the aggregate stock ownership of certain stockholders (generally, 5% shareholders, applying certain aggregation and look-through rules) increases by more than 50 percentage points over such stockholders' lowest percentage ownership during the testing period (generally, three years). We have not determined whether an ownership change has occurred in the past. If we have experienced an ownership change in the past, our ability to utilize NOLs and tax credit carryforwards could be limited. Furthermore, future changes in our stock ownership, such as certain stock issuances and transfers between stockholders, some of which changes are outside of our control, could result in ownership changes under Section 382 of the Internal Revenue Code. For these reasons, we may not be able to utilize a material portion of our NOLs and tax credit carryforwards, even if we attain profitability.

According to the American Taxpayer Relief Act of 2012 (HR 8) signed into law on January 3, 2013, the federal research credit, which was allowed to expire on January 1, 2012, was retroactively extended through 2013. The federal research credit for the retroactive extensions is reflected in the 2013 tax provision.

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Specific Risks Relating to Our Intellectual Property

We may be unable to effectively protect our intellectual property, which would negatively affect our ability to compete.

We depend on our proprietary HPC platform for our success and ability to compete. If others are able to reproduce our technology, our business will suffer significantly unless we can prevent them from competing with us. As of December 31, 2013, we owned or had exclusive licenses to 1,230 U.S. patents and patent applications (some of which also have foreign counterparts), which we believe protect our rights in our HPC platform and our rights in the technology developed under the CDPs. While we have been filing patent applications to seek protection for the further advancements of our HPC platform, patent laws provide only limited protection. Furthermore, we may not be able to sustain the high rate of patenting we maintained in the previous two years due to the expense and resource-intensiveness of the patenting process. For these and other reasons, we cannot assure you that we have sought or that we will seek patent protection of all our rights in our HPC platform and our rights in the technology developed under our CDPs in all jurisdictions. We also cannot assure you that all maintenance fees have been paid or that all filings have been made with the appropriate regulatory or governmental authorities with respect to any IP rights (including patents) registered or applied for outside of the U.S. that we purchase. In addition, patent protection in foreign countries may be limited or unavailable where we need this type of protection. A more detailed description of how we protect our IP rights (including patents) is set forth in Part I, Item 1: “Business - Intellectual Property” of this Form 10-K.

The patent positions of technology companies, including ours, are often uncertain and involve complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets or other forms of legal protection. We apply for patents covering our HPC platform and further advancements of our HPC platform as we deem appropriate. However, we may not obtain patents on all inventions for which we seek patents. Further, any patent claims we file for may be challenged during prosecution or any patent claims we are issued may be challenged after issuance. This may result in the claims being narrowed in scope or extinguished as a result of these challenges. Additional uncertainty may result from the recent and ongoing consideration and passage of patent reform legislation by the United States Congress, legal precedent as handed down by the United States Federal Circuit and Supreme Court as they determine legal issues concerning the scope and construction of patent claims and inconsistent interpretation of patent laws by the lower courts. For these reasons, among others, our existing patents and any future patents we obtain may not be sufficiently effective in preventing others from practicing our technologies or from developing similar or superior products. In that case, our revenue and operating results could decline.

Our strategy includes obtaining patent protection for technology developed in collaboration with our customers. A portion of our revenue from our customers derives from the licenses granted by us to our customers under these patents. In certain instances our ability to obtain patent protection may require customer approval. If the customer does not provide its approval, we cannot proceed with patent protection and the technology will be subject to trade secret protection only. If we are unable to obtain patent protection, we would not be able to enforce patent rights to the technologies in question.

We have developed in the past, and may develop in the future, patented technology with U.S. federal government funding. When new technologies are developed with U.S. government funding, the government obtains certain rights in any resulting patents, including a nonexclusive license authorizing the government to use the invention for non-commercial purposes. These rights may permit the government to disclose our confidential information to third parties and to exercise “march-in” rights to use or allow third parties to use our patented technology. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application

of the U.S. government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, U.S. government-funded technology may be subject to restrictions on transfer to foreign entities, and some U.S. government-funded data may be subject to public disclosure under the Freedom of Information Act.

Many of our customers and competitors have significant operations outside the United States. However, foreign laws may not afford us sufficient protections for our intellectual property, and we may not always seek patent protection outside the United States. We believe that our success depends, in part, upon our ability to obtain international protection for our IP rights. However, the laws and judicial systems of some foreign countries may not be as comprehensive as those of the United States and may not be sufficient to protect or enforce our proprietary rights abroad. Accordingly, our international competitors could obtain foreign patent protection for, and market overseas, products and technologies for which we are seeking patent protection in the United States, and may also be able to successfully enforce such patents in such foreign countries against us or against our customers.

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Confidentiality agreements with employees and others may not adequately prevent disclosures of trade secrets and other proprietary information.

We rely in part on confidentiality and trade secret protection to protect our confidential and proprietary information and processes. However, trade secrets are difficult to protect. We have taken measures to protect our trade secrets and proprietary information, but these measures may not be effective. We require new employees and consultants to execute confidentiality agreements upon the commencement of an employment or consulting arrangement with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that all rights in and to the inventions conceived by the individual in the course of rendering services to us shall be assigned to us. Nevertheless, employees, collaborators or consultants may still disclose or misuse our confidential information, and we may not be able to meaningfully protect such information or our trade secrets. In addition, others may independently develop substantially equivalent information or techniques or otherwise lawfully gain access to our trade secrets, and thereafter communicate this information to others without maintaining its confidentiality. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection or enforce our trade secrets could adversely affect our competitive business position.

Significant litigation over intellectual property in the industry may cause us to become involved in costly and lengthy litigation, which could subject us to liability, require us to stop licensing our developed technology or force us to develop new technology.

Whether or not patents are granted to us, litigation may be necessary to enforce our IP rights, to defend against a claim of infringement of IP rights of others or to determine the validity and scope of our proprietary rights or the proprietary rights of others. Because infringement is a fact-intensive inquiry, and because patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing (or, in some cases, are not published until they issue as patents), we cannot be certain that we do not now, and will not in the future, infringe a third party's patent rights. We may also become party to claims by our customers to IP rights developed by us in connection with a CDP. If our customers become involved in disputes with third parties over allegations that our customers' practice of our IP rights infringes the IP rights of such third parties, it may also become necessary for us to become involved in such disputes.

Any claim, even if without merit, could be time consuming to defend, result in costly litigation, or require us to enter into licensing agreements, resulting in unexpected operating costs and reduction in our operating profit. Moreover, our opponents in any litigation may have significantly more resources with which to defend against or assert claims in the litigation. A successful claim of infringement against us in connection with the use of our technologies could force us to stop using our technologies that incorporate the infringed IP; pay substantial monetary damages or royalties; grant cross-licenses to third parties relating to our own IP; obtain a license from the owner of the infringed IP, which may not be available to us on acceptable terms or at all; or re-engineer our platform or products to avoid further IP infringement, which may be technically impossible or commercially infeasible. The occurrence of any of these eventualities could adversely affect our business. Even if we are successful in defending such a claim, litigation could also divert our resources, including our managerial and engineering resources. Any infringement claim or other litigation against or by us could have a material negative effect on our business.

Our intellectual property indemnification policies and obligations may adversely impact our business and operating results.

Any assertion by a third party asserting ownership or other rights to technology developed under our CDPs could result in our customers becoming the target of litigation and we may be bound to indemnify our customers under the

terms of our license agreements. These obligations could result in substantial expenses to us, which could have a material adverse effect on our business, financial condition and results of operations. In addition to the time and expense required for us to satisfy our support and indemnification obligations to our customers, any litigation could severely disrupt or shut down the business of our customers, which in turn could damage our relations with them and have a material adverse effect on our reputation, business, financial condition and results of operations.

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Risks Related to Ownership of Our Common Stock

Our stock price may be volatile, which may cause the value of our common stock to decline and subject us to securities class action litigation.

The market price of our common stock could be subject to significant fluctuations. Market prices for securities of early stage companies have historically been particularly volatile. The stock markets in general have experienced price and volume fluctuations that have affected, and continue to affect, the market prices of equity securities of many companies. A portion of most future fluctuations in our stock price will likely be related to the risk factors described in this section. However, as is the case for many companies with volatile stock prices, price fluctuations may be disproportionate, or even unrelated, to their operating performance. In the past, many companies that have experienced volatility in the market price of their stock have become subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business. Factors that could contribute to volatility in our stock price include but are not limited to the following:

- fluctuations in our financial results or outlook, or those of our customers or of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- changes in market valuations of similar companies;
- changes in our capital structure, such as future issuances of securities or the incurring of debt;
- announcements by us or our competitors of significant contracts, acquisitions or strategic alliances; and
- litigation involving us, our general industry or both;
- additions or departures of key personnel;
- regulatory developments in the U.S., countries in Asia, and/or other foreign countries;
- investors' general perception of us; and
- general economic and political conditions in the US and globally, such as recessions, interest rate changes and international currency fluctuations.

We have incurred and will continue to incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could harm our results of operations.

As a public company, we have incurred and will continue to incur significant accounting, legal and other expenses that we did not incur as a private company, including costs associated with public company reporting requirements. We have incurred and will continue to incur costs associated with existing and evolving corporate governance requirements, including requirements under Section 404 and other provisions of the Sarbanes-Oxley Act, as well as rules implemented by the Securities Exchange Commission, or SEC, and the exchange on which we list our common stock. These rules and regulations have substantially increased our financial and legal compliance costs and may cause further increases in the future. These rules and regulations also make it more expensive for us to maintain director and officer liability insurance.

If we experience material weaknesses or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately report our financial condition or results of operations, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

As a public company, we are required, under Section 404 of the Sarbanes-Oxley Act, to conduct a comprehensive evaluation of our disclosure controls and procedures over financial reporting. The results of this assessment need to be included in our annual report and we are required to disclose any material weaknesses identified by our management in our internal control over financial reporting, as well as an opinion from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting. A material weakness is a control deficiency or combination of

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control deficiencies that results in more than a remote likelihood that a material misstatement of annual or interim financial statements will not be prevented or detected.

We devoted significant resources to hiring personnel and compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404 for the year ended December 31, 2013. In future years, we may need to devote more resources to Section 404 compliance, and we may not be able to complete our annual evaluations, testing and any required remediations in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective. Lack of effective controls could severely inhibit our ability to accurately report our financial condition or results of operations. We cannot assure you that there will not be material weaknesses and/or significant deficiencies in our internal controls in the future. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm were to issue an adverse opinion on the effectiveness of our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline.

The concentration of our capital stock ownership by our executive officers, directors and 5% stockholders will limit your ability to influence corporate matters.

Our executive officers, directors, current five percent or greater stockholders and entities affiliated with them together beneficially owned approximately 73.1% of our common stock outstanding as of December 31, 2013. Entities affiliated with Redpoint Ventures, entities affiliated with CMEA Ventures and entities affiliated with U.S. Venture Partners beneficially owned approximately 16.3%, 11.8% and 9.2%, respectively, of our common stock outstanding as of December 31, 2013. This significant concentration of share ownership may adversely affect the trading price for our common stock because investors often perceive disadvantages in owning stock in companies with concentrated stock ownership. Also, these stockholders, acting together, will be able to influence our management and affairs and determine the outcome of matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this concentration of ownership may have the effect of delaying or preventing a change of control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control, even if that change of control would benefit our other stockholders.

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

If our existing stockholders sell, or if the market believes our existing stockholders will sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline significantly. As of December 31, 2013, we had 46,486,372 shares of common stock outstanding. All of these shares can be resold at any time, subject in some cases to the volume limitations and other restrictions of Rule 144 promulgated under the Securities Act of 1933, as amended, or the Securities Act, and upon the lapse of our right of repurchase with respect to any unvested shares. Certain of our officers and directors sell shares from time to time pursuant to 10b5-1 automated sales plans, and investors may react negatively to any insiders disposing of shares of our stock.

In addition, as of December 31, 2013, the holders of 17,080,613 shares of our common stock are entitled to certain rights with respect to the registration of such shares under the Securities Act. If we register such shares of common stock, these stockholders could sell those shares in the public market without being subject to the volume and other restrictions of Rule 144.

We also registered approximately $12.6 million shares of our common stock reserved for issuance under our equity plans. These shares can be freely sold in the public market upon issuance, subject to vesting restrictions and the lock-up restrictions described above.

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 stock adversely, our stock price and trading volume 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. If any of the analysts who may cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our

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competitors, our stock price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Anti-takeover provisions contained in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- staggered board of directors;
- authorizing the board to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- authorizing the board to amend our bylaws and to fill board vacancies until the next annual meeting of the stockholders;
- prohibiting stockholder action by written consent;
- limiting the liability of, and providing indemnification to, our directors and officers;
- eliminating the ability of our stockholders to call special meetings; and
- requiring advance notification of stockholder nominations and proposals.

Section 203 of the Delaware General Corporation Law prohibits, subject to some exceptions, “business combinations” between a Delaware corporation and an “interested stockholder,” which is generally defined as a stockholder who becomes a beneficial owner of 15% or more of a Delaware corporation's voting stock, for a three-year period following the date that the stockholder became an interested stockholder.

These and other provisions in our amended and restated certificate of incorporation and our amended and restated bylaws could discourage potential takeover attempts, reduce the price that 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.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Facilities

Our facilities currently consist of an aggregate of approximately 146,000 square feet of office, research and development clean room space in San Jose, California, pursuant to a lease that expires in 2025. For our CDP engagements, as of December 31, 2013, we were using approximately 67% of the capacity of our clean room space in San Jose. We have historically expanded and invested in our facilities to support the growth of our CDPs and we expect to be able to continue to do so on commercially reasonable terms as we engage in new CDPs in the future. We have no reason to believe that additional space that we may need in the future will not be available on commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

On August 23, 2013, we received a copy of a complaint from the California Division of Labor Standards and Enforcement ("DLSE") filed by an employee in the company’s research and development group claiming that the employee is owed back pay due to an incorrect classification as an exempt employee for overtime purposes. We have commenced a review of the employee's claim as well as a review of our policies regarding classification of employees for overtime purposes. On

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January 16, 2014, we participated in mediation with the attorney who represents the employee that filed the claim with the DLSE, as well as fourteen other current and former employees and contractors who are similarly situated. This mediation did not result in a settlement of the subject claims, and on February 18, 2014, the claimants filed a lawsuit against us in the United States District Court for the Northern District of California. We believe we have meritorious defenses to the claims and intend to vigorously defend against them in this regard. While we cannot predict the outcome of this matter, or of any legal or administrative proceedings related to this matter that have commenced or may be commenced in the future, we believe the amount of probable loss related to this matter will not have a material adverse effect on our business, operating results, financial condition or cash flows. Nevertheless, as of December 31, 2013, the Company accrued its best estimate of the expense associated with the matter.

From time to time, we may become involved in other legal proceedings and claims arising in the ordinary course of our business, including but not limited to legal proceedings and claims brought by employees or former employees relating to working conditions or other issues. We are not currently a party to any legal proceedings the outcome of which, if determined adversely to us, we believe would individually or in the aggregate have a material adverse effect on our business, operating results, financial condition or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

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

Market Information for Common Stock

Our common stock has been listed on The NASDAQ Global Select Market, or NASDAQ, under the symbol "IMI" since our initial public offering on November 18, 2011. The following table sets forth on a per share basis, for the periods indicated, the low and high sale prices of our common stock as reported by NASDAQ.

	Low	High
Fiscal Year Ended December 31, 2013		
First Quarter	$8.25	$10.69
Second Quarter	$7.00	$10.20
Third Quarter	$5.46	$