

ANNUAL REPORT 2011

INTEVAC

# **CORPORATE PROFILE**

# INTEVAC, INC.

We are a leader in the design, development and manufacturing of high-productivity, vacuum process equipment solutions. Our systems are production-proven for high-volume manufacturing of small substrates with precise thin film properties, such as those required in the hard drive and solar cell markets we currently serve.

In the hard drive industry, our 200 Lean® systems process approximately 60% of all magnetic disk media produced worldwide. In the solar cell manufacturing industry, our recently-introduced LEAN SOLAR™ platform, with applications including deposition, texture etch and ion implant, increases the conversion efficiency of silicon solar cells.

In our Photonics business, we are a leader in the development and manufacture of leading-edge, high-sensitivity imaging products and vision systems as well as materials identification instruments utilizing Raman technology. Our products primarily address the defense markets in addition to the industrial, medical and scientific industries.



FORWARD LOOKING STATEMENTS: The annual stockholder letter contains forward looking statements which involve risks and uncertainties. Words such as "believes", "expects", "anticipates" and the like indicate forward looking statements. These forward looking statements include comments related to our projected revenue, profitability, market share, requirements for and timing of new capacity, the timing of technology upgrades, hard disk areal density growth and technology transitions; the proliferation of new process steps for the photovoltaic cell manufacturing industry; the demand for hard disk drives and photovoltaic cells; length of development, marketing and deployment cycles for our new Equipment and Photonics products; our ability to proliferate our Photonics technology and products into major military programs; and our growth in government programs. Our actual results may differ materially from the results discussed in the forward looking statements for a variety of reasons, including those set forth under "Risk Factors" and should be read in conjunction with the Consolidated Financial Statements and related Notes contained elsewhere in this Annual Report on Form 10-K.

# LETTER TO OUR STOCKHOLDERS

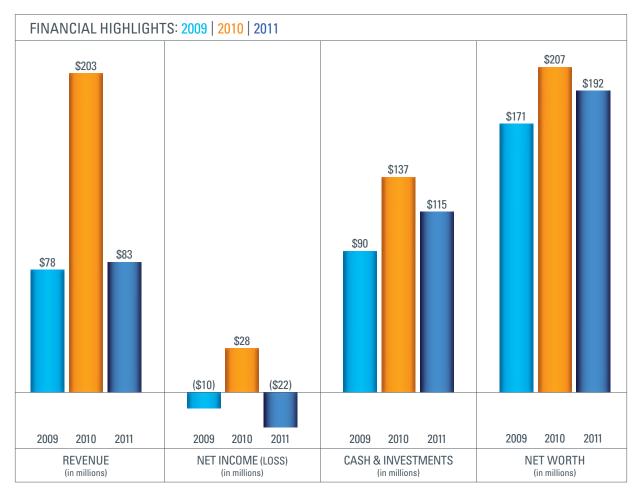
# **INTEVAC 2011**

2011 was a challenging year for our business following the strong results delivered in 2010. Our hard drive business was negatively impacted by the pending industry consolidations and the historic flooding in Thailand, which together resulted in a near stand-still in capital investments for media capacity. In our Photonics business, we experienced our first revenue decline since 2005, due principally to the congressional budget delays affecting some development programs with the U.S. military. None of our programs were cancelled; they were simply delayed.

While these factors led to financial results that fell short of what we expected going into the year, we were pleased with the progress made on our strategic growth initiatives. We continued to extend our technology lead in both the hard drive magnetic media equipment and Photonics markets we serve.

We also made significant progress in our equipment diversification strategy, targeted at the solar photovoltaic market, which is a far larger equipment market than the magnetic media deposition market. We delivered our first crystalline silicon solar cell deposition and etch systems in 2011, are on track with our ion implant development plans, and expect to ship our first implant evaluation system by mid-2012.

Our 2011 revenue was \$83 million with a net loss of \$22 million or \$0.96 per share. We continued to minimize cash losses and maintained a strong balance sheet, ending the year with cash and investments of \$115 million, tangible book value of \$167 million, and no debt.



# LOOKING FORWARD

# A RETURN TO GROWTH



## **EQUIPMENT BUSINESS**

The long-term outlook for our media manufacturing system business is very promising with analysts forecasting a doubling of hard drive shipments by the end of this decade. This is driven by the very high growth in digital data generation and the ever-persistent and increasing need to store this data, coupled with the cost, accessibility and reliability advantages of hard drives over alternative forms of storage. The drivers for this growth are multiple. Mobile devices such as smart phones and cameras, with video capability and ever-increasing pixel counts, are generating a deluge of data. Additionally, social media is creating a magnifying effect on this data creation. In turn, this data is being stored in multiple locations, many times over on multi-disk hard drives either remotely in the "Cloud" or locally on the PC. Corporations continue to generate more and more data, as well as governments, libraries, universities, and medical and research establishments that are just beginning to digitize their massive data stores. Unlike hardware, which eventually wears out, data lives forever and continues to grow upon itself.

We continue to believe that our magnetic media manufacturing systems provide the leading productivity and technology solutions to the hard drive industry. We are the market share leader, with about 60% share of worldwide media production, and with just one remaining competitor. Partnering closely with our customers, we continue to deliver solutions that support their technology roadmaps as well as improve their yields and lower their costs. Our systems are being used by all of the major hard drive customers to develop their next-generation media technologies.

The next significant magnetic media technology transition is anticipated to be thermal-assisted recording in two to three years time, with patterned media expected to follow several years later. The annual improvement rate in areal density, or the number of bits stored per square inch, is predicted to slow down to less than 30%, compared to the historical improvement rate of 40%, due to the increasing technological difficulty of achieving memory density improvements. Given that the expected demand for digital storage is forecasted to grow by approximately 50% per year, this slowing in areal density will likely lead to disk growth outpacing drive growth, resulting in increased demand for our equipment.

In 2012, the hard drive industry is expected to gradually recover from the disruption in the supply chain for hard drive components that occurred following the devastating flooding in Thailand, and finally be able to meet end market demand for drives towards year end. Once this happens, media capacity is expected to become constrained, resulting in the need for our customers to add capacity through purchases of our equipment.

In our equipment diversification strategy, we are leveraging our expertise and technology leadership in providing very high productivity vacuum process equipment for small substrates. This expertise was developed and honed in the hard drive industry and we are now applying this expertise to the very similar needs of the solar cell market.

To succeed in this technology-based commodity market, solar companies must continuously lower their costs and improve the capability of their products. The key performance metric is cost per watt, with cell conversion efficiency being the biggest lever. The industry to date has lowered this cost metric principally through increasing volumes as well as incremental process and yield improvements.

In 2011, excess supply versus demand resulted in significant price erosion for solar modules. In the long term, this is good news as it enables solar to compete for a greater share of electricity production without government assistance. We expect the large, well capitalized and vertically integrated companies as well as the technology leading companies to consolidate and grow over the long term. These are the companies that we are targeting as we penetrate the market with new products that help increase cell conversion efficiency and lower costs per watt.

The roadmap for reducing costs for silicon-based solar cell modules is well defined and will require more sophisticated process steps, similar to what we have witnessed in the hard drive industry over the last twenty years. We believe we can bring value to the solar industry with our deep process technology expertise in deposition, etching and doping by ion implant, combined with our high-productivity system expertise. In 2011, we qualified our second-generation LEAN SOLAR platform on a silicon deposition application for metals and transparent conductive oxides. In the fourth quarter of 2011, we shipped our first NanoTexture™etch system, which utilizes the same platform, to a prominent solar customer in Asia. NanoTexture modifies the surface of the silicon cell to enable more light trapping and hence higher efficiency.

Solar Implant Technologies, which we acquired late in 2010, had developed a low-cost, high-productivity ion implant module prototype for the solar market. We made good progress in 2011, hitting the critical development milestones for demonstrating key elements of the engineering and technology required for a successful product. Our ion implant module, ENERG *i*<sup>™</sup>, is now integrated onto our LEAN SOLAR platform, with the first customer shipments expected by mid-2012.

Our goal for 2012 is to have multiple customers qualify our LEAN SOLAR ENERG *i* and NanoTexture products, with year-over-year growth in new equipment revenues. Successful qualifications and repeat orders in 2012 would lead to meaningful sales commencing in 2013. We continue to project that the served market for our products will be over \$1 billion and that for the next few years most of our sales will be aimed at retrofit upgrades that improve the cell efficiencies achieved on existing solar manufacturing lines.

## PHOTONICS BUSINESS

Intevac has a long history in low light imaging, as we were originally an early manufacturer of analog night vision sensors prior to embarking on the development of digital low light sensors. We have developed a family of digital low light sensors and cameras that address the needs of the military market. Our technology leading products are being integrated into the majority of the low light imaging development programs for the U.S. military, positioning this business for ongoing long-term growth.

We achieved a number of key milestones in 2011 that indicate a return to growth in 2012. Significant progress was made ramping production programs for our NATO rifle sight night vision sensor modules and our LIVAR® cameras, building our pipeline of new programs and advancing the capability of our core sensor technology. We shipped a record number of cameras and modules and continued to improve our yields and lower our low light sensor costs, resulting in a 500 basis point gross margin improvement compared to 2010. We received initial program funding to ramp our internal capacity for volumes of up to 1,000 cameras for the Apache helicopter and other future night vision programs. Additionally, we were awarded two new multi-year near-eye display production programs for training simulators.

We expect 2012 will be a return to growth for our Photonics business, with solid product revenues and an increase in contract development revenues. Our focus this year will be achieving profitability while continuing to deliver on our program and product commitments. We had expected to achieve this important milestone in 2011, but the delays in the military budget approval pushed revenues below our breakeven level. We expect to see initial qualification of head-mounted night vision systems for applications ranging from avionic helmets and goggles, to goggles that digitally fuse images from both a thermal camera and our own low light camera. We will also continue to advance the state of the art for our low light sensors.

LIVAR, our unique long range camera system, is expected to be deployed and qualified on additional platforms. Today we have production programs for a fixed wing aircraft application using this camera, and we are developing a LIVAR camera compatible with gimbals for use on helicopters and UAVs. Long range surveillance is expected to continue to be a priority for the military.

## **IN SUMMARY**

The digital revolution continues unabated in all aspects of life with growing applications and surging usage. The world strives for clean and inexpensive electricity from the sun. Our products serve these significant and growing needs. Our future success builds upon all that we have achieved and created. Our team realizes the significant opportunity in front of us and is determined and persistent in pursuit of success. I wish to express my sincere appreciation to all our employees for their hard work, commitment, and creativity as well as to our customers and stockholders for their ongoing support.

Kevin Fairbairn

Kevin fairbain

President and CEO

# INTEVAC, INC.

#### CORPORATE INFORMATION

#### CORPORATE HEADQUARTERS

3560 Bassett Street Santa Clara, CA • 95054-2704 408.986.9888

#### INVESTOR INFORMATION

The Company's Annual Report, its 10-K and 10-Q reports to the SEC, and other information about Intevac, Inc. are available at www.intevac.com or by e-mail to idiener@intevac.com.

# INVESTOR RELATIONS CONTACT

JEFFREY S. ANDRESON 408.986.9888

#### REGISTRAR AND TRANSFER AGENT

COMPUTERSHARE TRUST COMPANY N.A. P.O. Box 43078 Providence, RI • 02940-3078 www.computershare.com

#### INDEPENDENT AUDITORS

GRANT THORNTON LLP 150 Almaden Blvd., Suite 600 San Jose, CA • 95113

# **GENERAL COUNSEL**

WILSON SONSINI GOODRICH & ROSATI 650 Page Mill Road Palo Alto, CA • 94304-1050

#### COMMON STOCK

The Company's Common Stock trades on the NASDAQ® National Market tier of the NASDAQ Stock Market under the symbol IVAC.

# STOCK PRICE HISTORY

4/2/11 7/2/11 10/1/11 12/31/11 High \$15.26 \$12.47 \$10.21 \$8.55 Low \$11.03 \$ 9.43 \$ 6.42 \$6.11

#### **DIVIDENDS**

The Company has not paid or declared any cash dividends.

## 2012 ANNUAL STOCKHOLDERS' MEETING

The Intevac Annual Stockholders' Meeting will be held Tuesday, May 8, 2012 at 4:30 p.m. (PDT) Intevac Corporate Headquarters 3560 Bassett Street • Santa Clara, CA, 95054

#### **CORPORATE OFFICERS**

#### JEFFREY S. ANDRESON (2007)

Executive Vice President Finance and Administration Chief Financial Officer, Treasurer and Secretary

## KIMBERLY M. BURK (2000)

Vice President, Human Resources

# KEVIN P. FAIRBAIRN (2002)

President and Chief Executive Officer

### LUKE A. MARUSIAK (2010)

Executive Vice President and Chief Operating Officer

# ANDRÉS (DREW) BRUGAL (2012)

Executive Vice President and General Manager Intevac Photonics

# NORMAN H. POND (1990)

Chairman of the Board

## MICHAEL A. RUSSAK (2008)

Executive Vice President and General Manager Hard Disk Equipment Products

# CHRISTOPHER W. SMITH (2010)

Executive Vice President and General Manager Emerging Markets

#### **BOARD OF DIRECTORS**

#### DAVID S. DURY (2002) 1,4

Co-Founder, Mentor Capital Group LLC

#### KEVIN P. FAIRBAIRN (2002)

President and Chief Executive Officer

## STANLEY J. HILL (2004) 2,3

Former Chairman and Chief Executive Officer Kaiser Aerospace & Electronics Corporation

#### NORMAN H. POND (1990)

Chairman of the Board

# THOMAS M. ROHRS (2010) 1,2

Chief Executive Officer Skyline Solar

# JOHN F. SCHAEFER (2010) 2,3

Former Chairman and Chief Executive Officer Phase Metrics

#### PING YANG (2006) 1,3

Former Vice President Research and Development Taiwan Semiconductor Manufacturing Company (TSMC)

- <sup>1</sup> Audit Committee Member
- <sup>2</sup> Compensation Committee Member
- <sup>3</sup> Nominating and Governance Committee Member
- <sup>4</sup> Lead Independent Director

The year () following each name indicates when the individual joined Intevac and/or the Intevac Board of Directors.

# **INTEVAC WORLDWIDE**



# **UNITED STATES**

# **CORPORATE HEADQUARTERS**

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# **INTEVAC VISION SYSTEMS**

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# **ASIA**

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