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# German trio report surge in orders

Strong demand across the photonics landscape as Jenoptik, Basler and SLM Solutions post their latest financial results.

Germany-headquartered Jenoptik, Basler, and SLM Solutions have each reported fast-growing order intake in the opening six months of 2017, indicating strong demand across a number of optics and photonics applications.

Executives at Jenoptik, the largest of the three companies, are now anticipating a strong second half after new orders hit

have set ourselves for this year."

The strength of the semiconductor market and recent restructuring efforts helped the Jena firm's optics and life science division deliver a much-improved profitability (earnings before interest and taxes) figure of €22.4 million, while the segment's order intake jumped 31 per cent on last year.

Production activity at the company's new



Photo: Jenoptik.

Jenoptik CEO Stefan Traeger, who took over from Michael Mertin earlier this year, reported a surge in order intake during the first half of the year - partly driven by demand from the semiconductor equipment sector.

record levels in the first half. At €405.3 million, the Jena firm's order intake was up nearly 27 per cent year-on-year.

Its new CEO Stefan Traeger also reported a 6.6 per cent increase in group sales, to €348.8 million. That boost was attributed in part to the currently buoyant market for semiconductor manufacturing equipment, with Jenoptik's "optics and life sciences" segment revenues up 15.6 per cent to €124.9 million.

"Two of our three segments reported decent growth in the first half-year, with the pace of growth in the second quarter increasing by comparison with the first three months of the year," Traeger noted. "Confident that we will achieve a further increase in the second half-year, we are well on course overall to reach the goals we

Rochester Hills site in Michigan has also begun on schedule, offering state-of-the-art metrology and laser machining equipment in close proximity to much of the US automotive industry.

## Basler booming

Meanwhile machine vision specialist Basler closed its half-year with record-breaking sales and an order book that has doubled in size in just 12 months.

The Ahrensburg maker of industrial cameras reported a 62 per cent rise in sales to €78.5 million and incoming orders of €100.4 million. Pre-tax earnings for the same period more than trebled, to €18.2 million.

Basler's CEO Hardy Mehl commented: "For the first six months of 2017, the VDMA [Germany's engineering association]

reported the strongest growth for image processing components [in] 15 years.

"For German manufacturers of image processing components this meant an order growth [of] 47 per cent and sales growth [of] 43 per cent - in the same period Basler's incoming orders grew by 100 per cent and sales by 62 per cent."

And although the order boom does now appear to be slowing down, Basler has raised its sales forecast for the year to between €140 million and €150 million - up from the previous estimate of €120 million to €130 million.

Basler has also expanded recently, with the acquisition of embedded vision technology developer mycable. "Customers who want to use Basler camera modules, but are hesitant due to the time-consuming integration of embedded processing platforms, will benefit from the merger and the associated competence expansion," said the firm, which sees embedded vision as a field primed for rapid growth.

## SLM books biggest-ever order

Not to be outdone, the laser additive manufacturing equipment firm SLM Solutions said its orders had jumped 18 per cent year-on-year, to €35.3 million for the first six months of 2017.

Company CFO Uwe Bögershausen, who is currently heading up the company following the departure of CEO Markus Rechlin earlier this year, said: "Additive manufacturing is becoming increasingly accepted and has meanwhile achieved strategic importance for major industrial companies. We are benefiting from this trend and booked our largest individual order in the company's history in June 2017."

Rechlin left the company in January, in the wake of the failed takeover bid for SLM by big-hitting GE Aviation. Although Rechlin and the executive board had recommended the offer, it did not gain sufficient shareholder support, with the former CEO regarding that decision as a missed opportunity.

Although the resulting uncertainty disrupted SLM's business at the time, the situation does now appear to be improving and the Lübeck firm was able to post its first positive operating cashflow since its 2014 initial public offering of stock.

<http://optics.org/news/8/8/27>

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# II-VI buys large UK wafer fab to expand laser production

**Additional VCSEL capacity acquired in \$80M purchase from Kaiam, which bought the facility just three months ago.**

The fast-growing optics and photonics firm II-VI is set for further expansion, with the acquisition of a large compound semiconductor wafer fabrication facility in the north of England.

Pittsburgh-headquartered II-VI announced that it had purchased the 300,000 square foot site, a third of which is a clean room suitable for epiwafer production, from current owner Kaiam for \$80 million. It comes just three months after Kaiam had itself acquired the facility from previous owner Compound Photonics.

## Capacity grab

The Newton Aycliffe site, originally built by Fujitsu to make memory chips but in fact used mostly by subsequent owners to produce gallium arsenide (GaAs) RF devices for mobile phone power amplifiers, will give II-VI potentially enormous additional capacity for making vertical-cavity surface-emitting lasers (VCSELs).

II-VI's CEO Chuck Mattera said: "This facility hosts one of the best clean rooms in the entire compound semiconductor industry and augments our capabilities at a time when industry capacity is rapidly becoming fully subscribed.

"Given the demand we anticipate, this acquisition will allow us faster time to market than building a proprietary green field site and will enhance our leadership position in the supply chain. It adds to our in-house capacity for VCSELs, and is also as part of a broader strategic move to provide a versatile 6-inch [diameter] wafer fab for GaAs, SiC and InP-based devices."

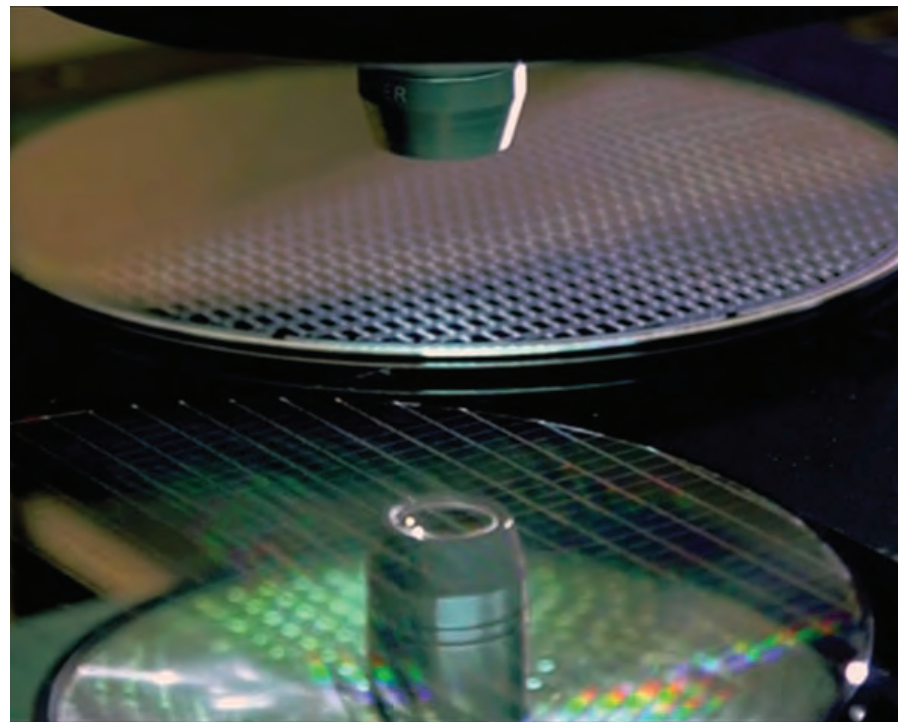
Mattera adds that the acquisition will, over time, enable the company to penetrate new high-growth markets driven by 3D sensing, 5G wireless, electric vehicles, and data center communications.

The latest expansive move by II-VI comes after its early-2016 acquisition of a similarly state-of-the-art facility previously owned by RF component maker Anadigics, and

major investment at the Illinois site of its subsidiary Epiworks.

## Multi-purpose fab

Despite selling the facility it bought so recently, Kaiam indicated that it would remain closely involved with production



*II-VI's acquisition of the large semiconductor wafer fab in Newton Aycliffe will give it potentially much greater capacity for optoelectronic device production - with VCSEL components appearing to be the main focus for the company.*

activity there. Its CEO Bardia Peseshki said: "II-VI will be using this fab more effectively by leveraging its full capacity and multi-purpose use.

"I am looking forward to working with II-VI to establish a commercial relationship that includes having II-VI provide InP-based epitaxial wafers and wafer fabrication services for our products as we continue to expand our transceiver business in the rapidly growing 100G and impending 400G datacenter markets."

Earlier this year Kaiam said that the manufacturing facility would allow it to

expand production of silica-on-silicon planar lightwave circuits, as well as high-speed optical transceivers.

News of the II-VI deal came as the company reported strong increases in sales, bookings, and earnings in its financial results for the year ending June 30.

II-VI's stock jumped in value by close to 10 per cent after Mattera and colleagues reported record sales of \$972 million and a surge in photonics-related activity.

"We achieved record quarterly revenue and record annual bookings of over \$1 billion, led by a 28 per cent annual revenue growth in our photonics segment," Mattera told investors.

Also noting the multi-purpose nature of the Newton Aycliffe fab, the CEO said that over the next 12 months he expected to

see the benefits of emerging key growth areas including extreme ultraviolet (EUV) lithography and 3D sensing, as well as the continued ramp in demand from wireless and optical communications applications.

## Diverse photonics portfolio

Overall, II-VI was able to post a 45 per cent increase in net earnings to \$95.3 million for the full year, as total sales grew 18 per cent to \$972 million.

The highly diversified II-VI makes products for several major growth areas in photonics, including high-power

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## II-VI buys large UK wafer fab to expand laser production

diodes, processing heads and beam delivery components for fiber lasers, high-performance optics used in the laser-driven sources of EUV steppers.

It is also one of the few providers of zinc selenide materials and optics used in high-power carbon dioxide laser systems for materials processing.

But in recent months it has been the prospect of wide deployment of optoelectronic devices for 3D sensing applications in consumer electronics that has driven much of the company's expansive moves and investments.

Demand for VCSEL components is expected to ramp up quickly in the remainder of this year to service those new applications, with II-VI indicating that key customer qualification is complete. The company cites market reports suggesting that the total available market in VCSELs will jump from \$800 million in 2015 to \$2 billion by 2020.

As recently as June the company also acquired the New Jersey-based Bell Laboratories spin-off Integrated Photonics, which is described as a world leader in Faraday rotator crystals for optical isolator components.

II-VI's stock price jumped in value by more than 8 per cent following the latest financial update and news of the wafer facility acquisition. At around \$38.50 early on August 7, it was trading at close to record highs on the Nasdaq exchange.

<http://optics.org/news/8/8/10>

# University of Arizona's John Greivenkamp elected to SPIE presidential chain

Telescope enthusiast and optics educationalist will serve as society's president in 2020.

SPIE Fellow John Greivenkamp, professor of optical science and ophthalmology at the College of Optical Sciences, University of Arizona, has been elected to the society's presidential chain.



Photo: SPIE.

John Greivenkamp will serve as SPIE president in 2020. He will follow after current incumbent Glenn Boreman, president-elect Maryellen Giger in 2018, and his immediate predecessor Jim Oschmann in 2019.

Announced by current SPIE president Glenn Boreman during the society's annual general meeting, which is taking place in San Diego this week alongside the Optics+Photonics conference, the result will see Greivenkamp serve as vice president next year, president-elect in 2019, and president in 2020.

Greivenkamp is the series editor of SPIE's popular "field guide" series of publications, and has taught a course on optical systems design since 2005. He has also served on numerous SPIE committees, and stood on the society's board of directors from 1997 through 2000, and again from 2012 through 2014.

### Kodak researcher

A graduate in physics and mathematics from Thomas More College, Greivenkamp completed his PhD in optical sciences at the University of Arizona in 1980.

After more than a decade working as a researcher at Eastman Kodak, he returned to Arizona to join the Optical Sciences Center there in 1992, where he has worked ever since.

In 2017 Greivenkamp collected the SPIE Educator Award for his dedication to both formal and informal optics education and, in SPIE's words, "his passion for transferring his knowledge to the next generation of

engineers and inspiring students of all descriptions to an appreciation of science".

While his technical interests stretch from interferometry and optical testing of aspheric surfaces, to ophthalmic and visual optics, ophthalmic instrumentation and measurements, optical system design, optical metrology systems, optical fabrication, and optics of electronic imaging systems, Greivenkamp is also said to have a passion for telescopes.

That passion led him to found the Museum of Optics at Arizona's College of Optical Sciences, which features a collection of antique and historic telescopes, microscopes, binoculars, lenses and cameras, some dating back to the 18th century.

### Presidential chain

Following Boreman's stint this year, the University of Chicago medical physics and radiology professor Maryellen Giger will serve as SPIE president in 2018, before Jim Oschmann from Ball Aerospace takes over for 2019.

In other SPIE results, former Newport executive Gary Spiegel was elected to serve as the society's secretary and treasurer for another year, while four newly elected society directors will serve three-year terms for 2018-2020.

The four new directors are Kazuo Kuroda from Utsunomiya University in Japan, Chris Mack from the semiconductor metrology firm Fractilia, Anita Mahadevan-Jansen from Vanderbilt University, and Kristen Maitland from Texas A&M University.

<http://optics.org/news/8/8/18>

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Ms. Letty Trevino, Sales Engineer  
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# IDEX spells out Rochester expansion plan

New state-of-the-art facility for optics and optofluidics activity should be up and running next year.

Diversified industrial equipment firm IDEX is expanding its presence in Rochester, New York, with construction of a new state-of-the-art optics facility in the key photonics location set to begin by the end of this year.

Building on the company's existing presence in the area through its specialist optical filter division Semrock and photonics equipment provider Melles Griot, IDEX says that the move will enable it to scale its optical components, sub-systems, and filters business.

## Optofluidics

Gus Salem, president of the IDEX Health & Science business unit - of which the company's optics activity is one part - said in a release: "The goal of this new facility is to create an Optics Center of Excellence that allows us to continue to advance our leadership position in life science optics and optical assemblies, as well as supporting the semiconductor and defense markets we serve."

The 100,000 square-foot site will carry out

both manufacturing and research and development activity, bringing together the Semrock and Melles Griot businesses already based in Rochester with the Carlsbad, California, end of the Melles Griot business, which has traditionally specialized in lasers and integrated optical systems.

"Additionally, we will be establishing a commercial, research, and development center for innovation in Carlsbad, that will enable continued growth in illumination technology and optomechanical assemblies," Salem added.

The expansion follows IDEX's decision to create an "optofluidics" division, which was unveiled last year to target the market for flow cytometry equipment in a more coordinated manner.

And that strategy appears to be working. In its financial update last month, IDEX said that sales related to the platform technology increased year-on-year, citing "market share wins and strong demand in all primary end markets".

"Since creating this new optofluidic enterprise, IDEX Health & Science has focused on the growth of integrated optofluidic sub-systems, components, and highly engineered solutions across its target markets," adds the company. "This focus has driven accelerated growth across its business and has revealed the need for a new facility that will allow IDEX Health & Science to execute on its long term growth plans."

## AIM Photonics connection

The new center is set to include a "world-class" optical coating facility, while supporting the scale-up of sub-system manufacturing and an expansion of optical sub-system design capabilities.

IDEX added that it selected the Rochester area for its new facility because of its strong pedigree in optics technology, through the likes of Eastman Kodak, Bausch & Lomb, and Xerox, and the local base of people, universities and supporting businesses.

"Additionally, the concentration of current employees and business functions along with governmental support of optical businesses in Rochester contributed to the decision," it added, referencing the local presence of the AIM Photonics program.

Construction of the new site is expected to begin in late 2017, with the IDEX employees set to move in at some point next year.

<http://optics.org/news/8/8/32>



Photo: Doug Cody/Bay Area Event Photography.

IDEX's 'health & science' business unit incorporates the company's optics and photonics activity, which is based around the well-known Melles Griot and Semrock brands it acquired several years ago. IDEX is focusing the activity on the emerging "optofluidics" sector for life sciences applications like flow cytometry.



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