



14-15 November 2022

EPIC TECHNOLOGY MEETING ON  
ELECTRONICS & PHOTONICS –  
TWO SIDES OF ONE COIN

Munich, Germany

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14–15 November 2022

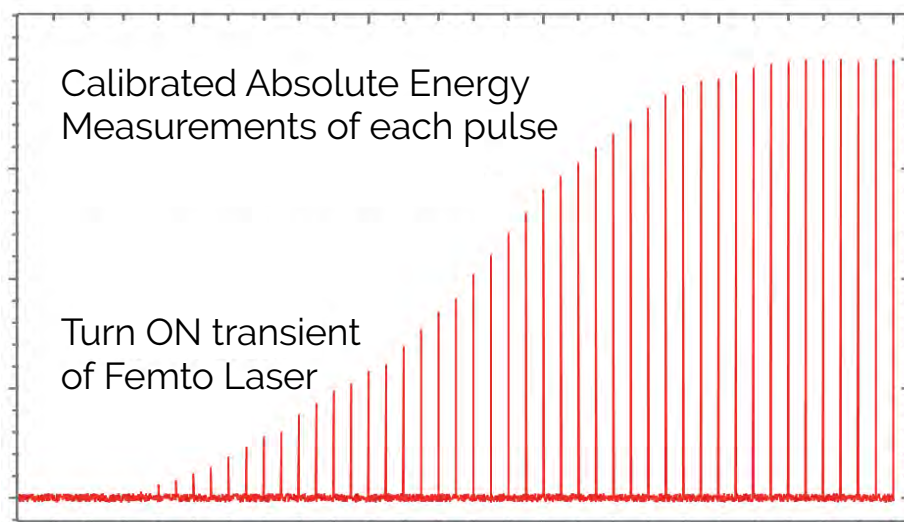
## EPIC Technology Meeting on Electronics & Photonics – Two Sides of One Coin

Munich, Germany

The aim of this meeting is to bring together key players from the semiconductor and photonics industries to explore technological and manufacturing challenges and to explore how their respective industries can contribute to solving them and learn from each other. There has been much noise in recent months about the semiconductor industry, this summit, the first of its kind, will bring both communities together, along the entire manufacturing value chain from design, manufacturing, testing, packaging, equipment and materials. EPIC is renowned for its extensive networking opportunities, expect to make many new interesting contacts! The event takes place in conjunction with the exhibitions Electronica (world's leading trade fair and conference for electronics) and SEMICON Europa (representing the semiconductor equipment and materials industry).

## Blink HS – High Speed Energy Laser Sensor

Up to 1 MHz, 50W, from UV to CO<sub>2</sub>  
**It is not a photodiode!**



## Monday, 14 November 2022

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- 12:00 – 13:00 **Registration & Lunch at Maritim Hotel, Munich**  
Foyer in front of Nürnberg Saal
- 13:00 – 13:15 **Welcoming words by Carlos Lee, Director General at EPIC**

### SESSION 1 – ADVANCED LASER MANUFACTURING IN MICROELECTRONIC INDUSTRY

- 13:15 – 13:35 **Small VCSELs but Big Range of Applications**  
Roman Koerner, Head of Device and Technology Development at Trumpf Photonics Components (Germany)
- 13:35 – 13:55 **A European 300mm Photonics Platform for Datacom and Beyond**  
Frédéric Boeuf, Technical Director Photonics Innovations at ST Microelectronics (France)
- 13:55 – 14:15 **High Resolution Electronics Printing on Glass, Ceramics and Polymers**  
Tadas Kildušis, President at AKONEER (Lithuania)
- 14:15 – 14:35 **Laser Dicing in Liquids – Key Enabling Technology for Advanced Chip Designs**  
Jan Hoppius, Co-Founder at LIDROTEC (Germany)
- 14:35 – 14:55 **UV Laser Processing of GaN MicroLED's, a Future Proof Technology**  
Oliver Haupt, Director of Strategic Marketing at Coherent (Germany)
- 15:15 – 16:00 **Coffee break - Networking**

### SESSION 2 – ADVANCED EQUIPMENT FOR MANUFACTURING PHOTONIC INTEGRATED CIRCUITS

- 16:00 – 16:20 **W2W and D2W Bonding Technologies Enabling Next Gen Integrated Photonics Manufacturing**  
Markus Wimplinger, Corporate Technology Development & IP Director at EVG (Austria)
- 16:20 – 16:40 **Role of Materials for Semiconductor Manufacturing Enabling Future Nano-optical Applications and Devices**  
Thomas Gadda, CTO at PiBond (Finland)
- 16:40 – 17:00 **Photonics Assembly & Test – A Roadmap to High Volume Manufacturing**  
Torsten Vahrenkamp, CEO at FiconTEC (Germany)
- 17:00 – 17:20 **"More than Photonics" Solutions: Micro Transfer Printing at X-FAB**  
Joni Mellin, Product Marketing Photonics at X-Fab (Germany)
- 17:20 – 17:40 **Advanced InP DFB Laser Sources for Silicon Photonics Hybrid Integration**  
Iain Eddie, Director of Device Engineering at Sivers Photonics (United Kingdom)
- 18:00 – 21:00 **Networking Dinner in the hotel restaurant**

## Tuesday, 15 November 2022

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08:00 – 08:30 Morning Coffee & Networking

### SESSION 3 – FROM PHOTONIC CHIPS TO QUANTUM COMPUTERS

08:30 – 08:50 **Photons & Qubits – Design Solutions for Photonic ICs and Quantum Computers**  
Twan Korthorst, Group Director Photonic Solutions at Synopsys (Netherlands)

08:50 – 09:10 **Photonic Design Tools Are Irrelevant. This Is Why**  
Ronald Broeke, CEO at Bright Photonics (Netherlands)

09:10 – 09:30 **Exploit Laser-augmented Silicon Photonics Circuit Technology**  
Pascal Langlois, Chairman at SCINTIL Photonics (France)

09:30 – 09:50 **Optical Computing with Programmable Photonics**  
Jose Capmany, Co-founder and COO at iPronics (Spain)

09:50 – 10:10 **Optical Computing – Towards All-Optical Data Centers**  
Michael Kissner, CEO at Akethonics (Germany)

10:10 – 10:30 **Quantum Computing Using Photonic Chips**  
Michael Förtsch, CEO at Q.Ant (Germany)

10:30 – 11:15 Coffee Break - Networking

### SESSION 4 – CHALLENGES IN PACKAGING OF PHOTONIC CHIPS

11:15 – 11:35 **Photonic Boards – Opportunities and Challenges of Electro-Optical Co-Engineering**  
Nikolaus Flöry, Business Development Manager at Vario-optics (Switzerland)

11:35 – 11:55 **Challenges in Packaging Photonics – the PIC Perspective**  
Boudewijn Docter, President at EFFECT Photonics (UK / Netherlands)

11:55 – 12:15 **The Challenges of Packaging Photonic Components & PICs for Quantum Technology 2.0**  
Andrew Robertson, CTO at Bay Photonics (United Kingdom)

12:15 – 12:35 **Assembly of Photonic IC based Products: From Prototype to Volume Production**  
Joost van Kerkhof, COO at PHIX Photonics Assembly (Netherlands)

12:35 – 12:55 **Interconnect and Assembly Technologies for Next Generation Electronic and Photonics Systems**  
Hannes Hundsbichler, Product Line Director at Besi (Austria)

13:00 – 14:00 Networking Lunch in the hotel restaurant

### » CONTACTS

Anna Mårtensson, Marketing Manager, +46 73 948 07 99

Carlos Lee, Director General, mobile + 32 473300433

Ivan Nikitski, Photonics Technologies Program Manager, + 33 699644563

# Participants

Name	Surname	Job Title	Company	Country
Algita	Stankeviciute	Sales Engineer	Imagine Optic	France
Alma Vida	Zamorano Castro	Technology and Trend Radar Analyst	Merck	Germany
Amédée	Zryd	Dir. R&D	Synova	Switzerland
Amiel	Lopes	Laser	Applications Engineer Posalux	Switzerland
Amir	Sharghi	Product Manager	Instrument Systems	Germany
André	Richter	General Manager	VPIphotonics	Germany
Andrea	Brinciotti	Managing Director	Laser Point	Italy
Andreas	Freitag	Key Account Manager	AEMtec	Germany
Andreu	Llobera	Head of Photonic systems	Silicon Austria labs	Austria
Andrew	Robertson	CTO	Bay Photonics	United Kingdom
Anke	Odouli	Exhibition Director	Messe Munich	Germany
Anna	Mårtensson	Marketing Manager	EPIC	Sweden
Arne	Leinse	CEO	LioniX International	The Netherlands
Benoît	d'Humières	Partner	TEMATYS	France
Berend	van der Grinten	Program Manager	Demcon	The Netherlands
Boudewijn	Docter	President/Founder	EFFECT Photonics	Netherlands
Carles	Pizarro	Bondia CEO	Simulacions Optiques	Spain
Carlos	Lee	Director General	EPIC	Belgium
Changsong	Xie	Senior R&D Manager	Huawei	Germany
Daniele	Zanato	Sales Manager	Laser Point	Italy
Deborah	Mohrmann	Business Development Manager	Fraunhofer (IAF)	Germany
Eero	Koivusalo	COO	Reflekron	Finland
Eleonore	Hardy	Business Developer	CEA-LETI	France
Emanuele	Guglielmi	Co-founder and CTO	PhotonPath	Italy
Florian	Blobner	Chief Product Officer	Photona / Laser Components	Germany
Francesco	Antolini	Senior Researcher	ENEA	Italy
Frédéric	Boeuf	Technical Director Photonics Innovations	ST Microelectronics	France
Gauthier	Briere	Product Marketing Manager	Applied Materials	The Netherlands
Gerald	Dahlmann	Director Strategic Marketing	Coherent Corp.	Switzerland
Gloria Micó	Cabanes	UPVfab Facility Manager	Polytechnic University of Valencia	Spain
Guillaume	Vienne	Photonics Technical Leader	Unity-SC	France
Hannes	Hundsichler	Product line Director/Director Productline Multi Chip Die Bonding	Besi	Austria
Iain	Eddie	Director of Device Engineering	Sivers Photonics	United Kingdom
Ivan	Zyulkov	Business Development Manager	Umicore	Belgium
Ivan	Nikitski	Photonics Technology	Manager	EPIC
Jan	Hoppius	Co-Founder	Lidrotec	Germany
Jan Hendrik	Peters	Owner	Consult Dr. Jan Hendrik Peters	Germany

<b>Name</b>	<b>Surname</b>	<b>Job Title</b>	<b>Company</b>	<b>Country</b>
Jean-Louis	Gentner	CEO	Almae Technologies	France
Jean-Luc	Polleux	CTO	ICON Photonics	France
Jimena	Garcia-Romeu	CEO	Alcyon Photonics	Spain
Jochen	Knopf	Head of Computational Physics	Carl Zeiss	Germany
Jonas	Buchmann	Key Account Manager	Ocean Insight	Germany
Joni	Mellin	Product Marketing Manager Photonics	X-FAB Global Services	Germany
Joost	van Kerkhof	COO	PHIX Photonics Assembly	Netherlands
Jose	Capmany	Professor and Co-Founder	iPronics, Programmable Photonics, Universitat Politecnica de Valencia	Spain
Juha	Larismaa	Senior Product Development Engineer	Okmetic	Finland
Kalle	Palomäki	Member of the Board of Directors	Modulight	Finland
Leon	Hol	Managing Director NTS Optel	NTS Optel	The Netherlands
Leonardo	Del bino	CTO, Co-Founder	Akhetonics	Germany
Lucas	Redlarski	General Manager	Mitutoyo Research Center Europe	The Netherlands
Majid	Sarhangi	Technical Market Manager	Evatec	United Kingdom
Malte	Ennen	Sales Engineer	FiconTEC Service	Germany
Marc	Hennemeyer	Director Process Technology Lithography	SUSS MicroTec Solutions	Germany
Marc	Beusenber	Director R&D	IMS	The Netherlands
Marko	von der Leyen	CTO	Quantum Dice	United Kingdom
Markus	Wimplinger	Corporate Technology Development & IP Director	EV Group	Austria
Martin	Völcker	Principal Innovation Programs	Carl Zeiss	Germany
Matthäus	Banach	CTO	Finetech	Germany
Mayeul Durand	de Gevigney	Global Product Manager	Unity	France
Michael	Förtsch	CEO	Q.Ant	Germany
Michael	Steinberg	Chief Sales Officer	Finetech	Germany
Michael	Kissner	CEO	Akhetonics	Germany
Mikko	Karppinen	Team Leader Photonics & RF Integration	VTT	Finland
Mohssen	Moridi	Head of Research Division Microsystems	Silicon Austria Labs	Austria
Nikolaus	Flöry	Business Development Manager	Vario-optics	Switzerland
Oliver	Haupt	Director Strategic Marketing	Coherent Corp.	Germany
Pascal	Langlois	Chairman	SCINTIL Photonics	France
Petteri	Uusimma	Vice President	Modulight	Finland
Philippe	Bolle	CEO	Boltic	Belgium
Ralf	Terbrueggen	Director Technology	Corning Laser Technologies	Germany
Richard	Zeltner	Project Leader and Executive Assistant	Menlo Systems	Germany
Rob	Voorkamp	CEO SCIL Nanoimprint Solutions	SCIL Nanoimprint Solutions	The Netherlands
Roman	Koerner	Head of Device and Technology Development	TRUMPF	Germany

Name	Surname	Job Title	Company	Country
Ronald	Broeke	CEO	Bright Photonics	The Netherlands
Tadas	Kildusis	CCO	Akoneer	Lithuania
Thang	Dao	Staff Scientist	Silicon Austria Labs	Austria
Thierry	Lazerand	General Manager	Plasma-Therm Europe	France
Thomas	John	Managing Director	AEMtec	Germany
Thomas	Hessler	CEO	Ligentec	Switzerland
Thomas	Gädda	CTO	PiBond	Finland
Tolga	Tekin	Team Leader Photonics & Plasmonic Systems	Fraunhofer (IZM)	Germany
Torsten	Vahrenkamp	CEO	FiconTEC	Germany
Twan	Korthorst	Group Director Photonic Solutions	Synopsys	The Netherlands
Uwe	Linß	Director of Sales EMEA	FOCUZ Manufacturing	Germany
Víctor Gil	Varón	Business Assistant	Quality Photonics Optics	Spain
Yasar	Kutuvantavida	R&D	Huawei	Germany
Yuri	Flores	Project Manager	Fraunhofer	Germany

# modulight

[www.modulight.com](http://www.modulight.com)

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make the lasers  
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Modulight lasers are designed and manufactured in our fully vertically integrated semiconductor fab in Finland



AEMtec is a global acting specialist for the development and production of customized and reliable micro- and optoelectronics. In the sector of miniaturization AEMtec provides a wide technology portfolio including Wafer Back-End Services, Chip on Board, Flip Chip, 3D Integration and Opto Packaging; all realized in cleanroom environment (ISO class 5 to 8). From concept to serial production including design and development, process management and industrialization the customers benefit from the services by a single source provider. AEMtec is certified by official organizations: ISO 9001, ISO 13485 (Medical) and ISO 14001 (Environment). [www.aemtec.com](http://www.aemtec.com)



**Andreas Freitag (Key Account Manager)** joined AEMtec in October 2019 as Key Account Manager. He studied process engineering at the University of Applied Sciences in Frankfurt am Main, Germany and started his career as project engineer in microsystems technology before he changed into the sales area. Here he worked for more than 20 years in different sales positions in the microtechnology, micro-optics and laser industry. At AEMtec, he now increasingly looks after customers from the optoelectronics sector.



**Thomas John (Managing Director)** began his professional career in the field of hardware and software development after successfully graduating as a communications engineer from the Deutsche Telekom University of Applied Sciences in Dieburg. He joined E-Plus Mobilfunk GmbH in 1995, where he was responsible for mobile communications network quality. His distinguished track record in the fields of contract management, product management and key account management included a number of other positions within the data and telecommunications sector at Mannesmann Arcor AG & Co. and at Sagem Orga GmbH. Thomas John has been involved in sales at AEMtec since 2007 and is in charge of this division since 2010.

## AKONEER



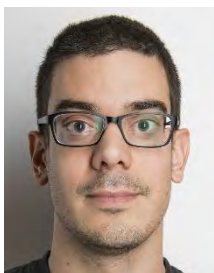
AKONEER is a Lithuanian designer and manufacturer of laser micromachining systems for industrial and scientific applications. Workstations, designed and manufactured by AKONEER, are used for high precision cutting, drilling, micro-milling, welding, isolating, intra-volume marking of transparent materials, polymerization and related processes in science institutions and industrial lines worldwide. AKONEER has developed various technology processes for semiconductor, solar cells, transparent and extra hard materials machining, as well as provided complete laser micromachining equipment for these processes. In 2022, AKONEER introduced laser machines for SSAIL technology, that enables fast printing of electronics on standard polymers, glass, ceramics and other dielectric materials. Patented SSAIL technology is currently being validated for automotive, heterogenous chip integration and display industries. [www.akoneer.com](http://www.akoneer.com)



**Tadas Kildušis (President and CCO)** is working in laser micromachining industry for more than ten years. After co-founding and leading Direct Machining Control for 7 years, in 2022, he transferred to Akoneer to work on new laser micromachining technologies for electronics and semiconductor markets.



Akhetonics is developing the first all-optical RISC processor. We are a start-up based and founded in Germany in 2021 with members from all over the EU. With our in-house developed photonic design automation tools and all-optical logic gates we are in a unique position to develop the first all-optical digital computation devices. Our goal is to usher in a new era of digital devices that are radically more power efficient and boast a much lower latency by not relying on electronics. [www.akhetonics.com](http://www.akhetonics.com)



**Leonardo Del Bino (Co-founder CTO)** graduated in applied physics from the University of Florence and obtained his PhD in applied photonics from Heriot-Watt University in Scotland. He then worked at the National Physical Laboratory (UK) and Max Planck Institute for the science of light (Germany) before cofounding Akhetonics. During his academic career, he invented all-optical memories and logic gates and studied the application of nonlinear optics to digital devices. Also, he developed clean room fabrication processes for low losses devices in silica and silicon nitride. Last year, Leonardo made a career shift by cofounding Akhetonics, applying his expertise in nonlinear optics devices and fabrication towards the realization of the first all-optical CPU.



**Michael Kissner (CEO)** is the CEO of Akhetonics, a photonics start-up developing the first digital all-optical CPU. With over 15 years of experience in cyber security, Michael's focus has been on computer architectures and chip security, having held various positions in the field. He studied mathematical physics and received his PhD from the armed forces university in Munich, leveraging deep learning to develop novel methods in physical simulation.

Alcyon Photonics partners with customers to provide wide bandwidth and polarization management to photonics solutions such as transceivers, FBG or OTDR. Additionally, Alcyon Photonics' library of photonics designs brings comprehensive support to the design of photonics application requiring increased capacity for data transmission and minimal information loss in the fields of communication, sensing or data comm, among others. [www.alcyonphotonics.com](http://www.alcyonphotonics.com)



**Jimena Garcia-Romeu (CEO)** is currently CEO to Alcyon Photonics a start-up which designs and licences photonic integrated circuits (PICs). The developed designs are based on SubWavelength Grating (SWG) technology, which enables disruptive light management through metamaterial-like design, enabling polarization management along wide bandwidth. Alcyon has already developed a Library-Diy (Do It Yourself), including a comprehensive and growing set of high-performance IP building blocks that cover not only complex functionalities technologies, enabling and supporting the design of applications in the fields of communication or sensor. Prior to that Jimena's professional experience has taken place in the areas of business development, marketing, and strategy. Along her career at multinational companies such as Freenow, Telefonica, Huawei, Microsoft and Vodafone.



**Almae Technologies** entered into operation on Feb 1st, 2016 and has been created as a spin-off of III-V lab, a joint lab of Nokia Bell Labs, Thales and CEA-Leti. Almae Technologies has build an industrial R&D and production platform for advanced PIC fabrication based on proven photonic integration building blocks, objective being to exploit platform for chip and wafer fabrication to support Telecom/Datacom market growth, first products launched being a portfolio of 10/25G EML products. Almae Technologies is also offering specialized foundry services to partner companies in the field of Photonic chip manufacturing and is open to discuss with interested parties whatever the application field. [www.almae-technologies.com](http://www.almae-technologies.com)



**Jean-Louis Gentner (CEO and Founder)** was previously Director and Administrator of III-V lab for Alcatel-Lucent (now Nokia) Bell Labs. In his career, he led research teams and many research projects in the field of Photonic Integration, being on InP or Silicon platform, and has taken active part in creating value with hardware innovation and transferring projects from R&D to production.



**Applied Materials** has expertise in materials engineering is the foundation for all the integrated circuits and flat panel displays that you use every day in computers, TVs, and mobile devices. Just as semiconductor technology changed the world of electronics, photonics technology will change the world of optics as we know it. Today, the Engineered Optics group, is leveraging decades of expertise in manipulating materials at an atomic level on an industrial scale to now manipulate photons and create new optical devices based on nanometer-sized structures. These new components can realize any optical function (lenses, beam splitters, polarizers, color filters, etc.) while allowing much thinner components than current solutions. This new field of optics will have a huge impact on Artificial Intelligence, Machine Learning, Autonomous vehicles, AR/MR, and a lot more. [www.appliedmaterials.com](http://www.appliedmaterials.com)



**Gauthier Briere (Product Marketing Manager)** is Product Marketing Manager at the Engineered Optics group under the CTO Office at Applied Materials. He obtained his Master Degree on Physics of Lasers and Light Matter Interaction at the Universite of Bourgogne. He, then pursues by doing a PhD in nanophotonics in 2019 at the Universite of Cote d'Azur under the supervision of Patrice Genevet at the Laboratory CRHEA, on the topic of Metasurfaces made of Gallium Nitride with application in the visible range. In 2020, he joined Dispelix, a successful Finnish start up, developing waveguide combiner for augmented reality application. He is now leading the Product marketing for flat optics at Applied Materials.

Bay Photonics provides a packaging service to Photonic and Microelectronic device developers and chip designers. We can help you bring your optoelectronic and PIC designs to a successful product market launch with our often-innovative packaging solutions. Drawing on our vast experience within datacoms, sensors, space and quantum sectors, we will help you design for Manufacture (DFM) and meet other essential requirements such as cost, time to market, performance etc. (DFX). Located at the EPIC centre in Paignton, England, and drawing on the unique history of the area and the Torbay Hi Tech Cluster (<https://epic-centre.co.uk/torbay-hi-tech-cluster/>). Our packaging capabilities include epoxy and eutectic die bonding auto gold and Aluminium ball and wedge wirebonding, optical alignment and hermetic sealing. [www.bayphotonics.com](http://www.bayphotonics.com)



**Andrew Robertson (CTO)** has a PhD in Laser Physics & Nonlinear Optics and a BSc in Laser Physics & Optoelectronics, both from the University of Strathclyde, Glasgow. Andrew has over 25 years of experience in successful commercial technology development & exploitation within photonics. In 2002, he was one of the founders of SIFAM Fibre Optics which was acquired by Gooch & Housego (G&H) in 2007 after 5 years of growth. Andrew held key senior engineering management roles within G&H and was a member of the Senior Management Team, becoming Senior Vice President and latterly focussing on Strategic Mergers and Acquisitions. Since 2020, Andrew has been with Bay Photonics and as CTO, has led the development of photonics based semiconductor packaging critical for enabling photonic driven Quantum Technology. Bay Photonics are currently supplying packaged SPADs and packaged quantum photonic integrated circuits (Q-PICs) for quantum computing, secure quantum communications, and quantum LIDAR imaging systems.



**Besi**

Besi is a leading supplier of semiconductor assembly equipment for the global semiconductor and electronics industries offering highest levels of accuracy, productivity and reliability at a low cost of ownership. The Company develops leading edge assembly processes and equipment for leadframe, substrate and wafer level packaging applications in a wide range of end-user markets including electronics, mobile, cloud server, high performance computing, automotive, industrial and solar energy. Customers are primarily leading semiconductor manufacturers, assembly subcontractors and electronics and industrial companies. [www.besi.com](http://www.besi.com)



**Hannes Hundsbichler (Product Line Director)** is working in semiconductor backend equipment industry since 2002. After several stations in application engineering and as an R&D project manager for high precision assembly equipment and bonding processes, he joined the Besi product management team in 2012, and, since 2016, is in charge of the product line Multi Module Attach, Besi's highly flexible mutlichip die bonding platform. He holds a bachelor's degree in industrial engineering from the University of applied sciences in Dornbirn (AT).



**bmbg consult** is an International Management Consultant with a long experience in semiconductor industry R&D, photonics, mask making, EUV ecosystems and infrastructure, product management, product strategy, business development with 30 years of management in different industries from group to division level, management of national and international funding projects, implementation and assessment of excellence systems. The main focus in recent years is on market access for high tech products. [www.bmbg-consult.de](http://www.bmbg-consult.de)



**Jan Hendrik Peters (Owner)** has a background in physics and business administration. He holds degrees in physics from the University of Washington, Seattle (M.S.) and University of Hamburg, Germany (PhD) and an MBA from the Nordakademie in Elmshorn, Germany, in International Management, International Marketing and Business Communication. Based on his management experience in the academic world (particle physics lab DESY) and the semiconductor business sector (AMTC and Carl Zeiss SMT), he started his management consultancy firm in 2017 to support SMEs in strategy development and balanced business management. He is an EFQM advisor, trainer, and assessor, helping companies to develop themselves. His work as an excellence assessor allows him to acquire a deep insight into management methods from organizations all over Europe, from Mexico, through the Near East and China which he transfers to the realm of small and medium enterprises.



**Boltic** is a European optical sub-assembly testing laboratory dedicated to telecom and datacom applications. At Boltic, we use our technical expertise in the industry to conduct analysis and extensive measurements on key components that constitute a network. Our services include: Interoperability testing, RMA, NPI, Test System Service Solution. We operate in a highly-controlled environment where our infrastructures are ESD safe and our cleanroom is ISO class 5 certified to ensure the highest quality standards throughout our services. We are equipped with the latest technologies available on the market by partnering with well known OEM test vendors to ensure the heterogeneity of our measurements. [www.boltic.be](http://www.boltic.be)



**BRIGHT Photonics** provides business and research with photonic IC (PIC) expertise. In case of product development customers profit from a reduced time to market by avoiding pitfalls and by selecting the right solutions for PIC and package. You want to design yourself? Then BRIGHT assists with state of the art specialised open source software solution Nazca-Design, training and functional IP-blocks. Design validation maximises your chance of PIC success for any given foundry. Do you have a clean room? We help you implement a custom PDK. BRIGHT where you need it. [www.brightphotonics.eu](http://www.brightphotonics.eu)



**Ronald Broeke (CEO)** has a background in physics, photonical engineering and business intelligence in Europe and the US. Ronald is excited to combine these interests in the photonics market.



CEA-Leti is an applied-research Institute located in Grenoble-France and specialized in micro and nano technologies. The 'Optic and Photonic Department' develops technologies in the field of lighting, display, sensing, imaging and communications. The department is integrated over the whole development cycle (Design, Fabrication and Tests), from the material (Si, SiN, Ge, III-V) to devices and circuit fabrication (300mm CMOS fab), packaging and test. In addition to Leti's 1,700 employees, there are more than 250 students involved in research activities, which makes Leti a mainspring of innovation expertise. Leti's portfolio of 1,880 families of patents helps strengthen the competitiveness of its industrial partners. [www.leti.fr](http://www.leti.fr)



**Eleonore Hardy (Business Developer Silicon Photonics)** joined CEA-Leti in 2018 as a Business Developer in Silicon Photonics. She holds a dual master's degree in Engineering and followed an MS in Management & Innovation. Eleonore has been working in the optics and photonics industry since 2005 and previously worked for Philips in the Netherlands and for Varioptic (a BU of Corning) in China. During her career, Eleonore has been successful in creating long-term value in lasers in France, China and India for Quantel (Lumibird), and spectrometers in Europe and Asia for Resolution Spectra Systems (Merck). Eleonore is dedicated to developing new business opportunities in silicon photonics, especially in communications, sensing and high-performance computing.



Coherent empowers market innovators to define the future through breakthrough technologies, from materials to systems. We deliver innovations that resonate with our customers in diversified applications for the industrial, communications, electronics, and instrumentation markets. Headquartered in Saxonburg, Pennsylvania, Coherent has research and development, manufacturing, sales, service, and distribution facilities worldwide. [www.coherent.com](http://www.coherent.com)



**Gerald Dahlmann (Senior Marketing Director)** is Senior Director of Marketing at Coherent. He has 20 years experience in the high-tech industry in the field of sensors, optics, optoelectronics and semiconductors. Gerald holds a degree in Electrical Engineering from TU Darmstadt and a PhD from Imperial College London.



**Oliver Haupt (Director Strategic Marketing)** is the Director of strategic marketing for the Flat Panel Display (FPD) market at Coherent. Over 20 years' experience in general laser applications. Holding a PhD in mechanical engineering from the University of Hannover. He started as head of sales for DPSS lasers, worked as product line manager for Coherent Excimer lasers and FlexOLED LLO systems in Goettingen/Germany, since 2015 focused additionally on laser based MicroLED and OLED display applications. Currently Oliver is responsible for the display products and market strategy at Coherent.

Corning Laser Technologies (CLT) combines more than 25-years' experience in designing laser-based machine tools with more than 150 years of Corning Incorporated's deep understanding of material science. CLT offers laser glass processing systems with the ability to cut Corning® Gorilla® Glass, Lotus™ NXT, and Eagle XG® glass, as well as other chemically strengthened and non-strengthened glass types including soda-lime and other brittle materials. These machine platforms serve a wide range of emerging applications that require precise and flexible glass processing technologies. They are constructed for 24/7 operation in an industrial environment. Respectively designed for substrate sizes from less than 10mm x 10mm up to 2.5m edge length and combining superior beam delivery technology from fixed optics via scanner systems to freeform and 3D cutting, CLT enables flexible adaption to individual customer design requirements. CLT also offers in-house process development and tailored solutions for full automation – leveraging knowledge and experience for a one-stop-shop for laser processing requirements. [www.corning.com](http://www.corning.com)



**Ralf Terbrueggen (Director Technology)** studied at the University of Applied Science in Cologne (FH Köln) and has been working in the field of lasers, laser applications, precision metrology and precision laser processing equipment since 1993. After completion of his master thesis at IBM T.J. Watson research center in New York, he spent seven years at GSI/Lumonics in the US and in Germany, followed by another seven-year period at the German precision metrology company MAHR. He joined the former Innolas Systems GmbH in 2008, which was acquired by Corning in 2014 and became Corning Laser Technologies. In his 25-year career he held positions as an applications engineer, product line manager, project manager, R&D manager and CTO. Together with his team he has contributed to the development of highly productive precision laser processing equipment and works closely with customers and suppliers to achieve the best industrial solutions for challenging laser applications.

EFFECT Photonics develops highly integrated optical communications products based on its DWDM and coherent optical System-on-Chip and DSP technologies. The key enabling technology for cost effective DWDM systems is full monolithic integration of all photonic components within a single chip, also known as Photonic Integrated Circuits (PICs). This technology combined with EFFECT Photonics' in-house DSP design capability, addresses the soaring demand for low cost and power efficient DWDM and coherent solutions in high bandwidth connections between Datacenters (Inter-Datacenter), mobile cell towers and other edge applications. [www.effectphotonics.com](http://www.effectphotonics.com)



**Boudewijn Docter (Founder / President)** started working in Photonic Integrated Circuits in 1998. He first worked as software developer and later as Photonic IC designer at start-up BBV, then Kymata and Alcatel Optronics. In 2010, he co-founded EFFECT Photonics as a spin-off from TU Eindhoven. In his current role, Boudewijn is responsible for local and European partnerships and internal/external technology evangelism.

ENEA is the National Agency for New Technologies, Energy and Sustainable Economic Development, a public body aimed at research, technological innovation and the provision of advanced services to enterprises, public administration and citizens in the sectors of energy, the environment and sustainable economic development. ENEA has highly qualified personnel, advanced laboratories, experimental facilities and excellent instruments for the realisation of projects, studies, tests, assessments, analyses and training services, with particular reference to product and process innovation and the valorisation of results to contribute to the development and competitiveness of the national economic system. Since its foundation in the 1960s, its strengths have been applied research, technology transfer and technical-scientific support to companies, associations, territories, central and local administrations: for this reason - unlike other research institutions - the Agency depends on the Ministry of Economic Development. Its focus sectors are energy technologies (renewable sources, energy storage, smart grids), for which the Agency is also the coordinator of the Energy National Technology Cluster, nuclear fusion and nuclear safety (the Agency is the reference national research coordinator), energy efficiency (with the National Agency for Energy Efficiency), technologies for cultural heritage, seismic protection, food safety, pollution, life sciences, strategic raw materials, climate change. [www.enea.it](http://www.enea.it)



**Francesco Antolini (Senior Researcher)** joined ENEA since 2002 where he worked in the field of Material Science studying the field of thin films technology and nanostructured material synthesis. He was a project manager of the EU project LAMP from 2010 to 2013 and project MiLEDI from 2018-2022 in the field of material science and photonics for display applications. Within the Department of Fusion and Technology for Nuclear Safety at the ENEA Center of Frascati (Rome) he is the leader of the laboratory for the chemical synthesis and laser patterning of nanomaterials and their photo-physical characterisation for display manufacturing.



EPIC is the European industry association that promotes the sustainable development of organisations working in the field of photonics. Our members encompass the entire value chain from LED lighting, PV solar energy, Silicon photonics, Optical components, Lasers, Sensors, Displays, Projectors, Optical fibres, and other photonics-related technologies. We foster a vibrant photonics ecosystem by maintaining a strong network and acting as a catalyst and facilitator for technological and commercial advancement. EPIC works closely with related industries, universities, and public authorities to build a more competitive photonics industrial sector, capable of both economic and technological growth in a highly competitive world-wide marketplace. [www.epic-assoc.com](http://www.epic-assoc.com)



**Anna Mårtensson (Marketing Manager)** has more than 20 years of marketing experience working for Hamamatsu Photonics. She is from Stockholm, Sweden and has studied marketing at Berghs School of Communication. Her knowledge in Nordic and European marketing, graphic design, and her background in the photonics industry brings high value to EPIC. In her current position she is supporting EPIC in all the communication activities of the association as well as the EU-funded initiatives.



**Carlos Lee (Director General)** brings with him a background in microelectronics which was acquired through several management positions held at the international association SEMI. He has been responsible in Europe for the SEMI International Standards program, managed technical and executive programs, and together with the advisory board advocated for a more competitive semiconductor and photovoltaic manufacturing industry. Carlos has a BBA in Finance and an MBA in Leadership & Change Management from United Business Institutes. He lives with his spouse and three children in Belgium.



**Ivan Nikitski (Photonics Technologies Program Manager)** has a PhD in Photonics. He has a strong technical profile built by his experience in both academia and industry of new materials, optoelectronics and semiconducting. During the last 10 years, he grew professionally in the technical environment of photonic technologies and complemented it with important experience in microelectronic production. Ivan has developed projects covering a wide range of applications, such as detectors and wearables, image sensors and integrated photonics, high-speed and high-power electronics, thin-film materials and in-line metrology. He has developed various processes for wafer-scale material production and characterization, wafer-level device testing, innovative device concepts and demonstrators.



**EV Group (EVG)** is a leading supplier of high-volume production equipment and process solutions for the manufacture of semiconductors, MEMS, compound semiconductors, power devices and nanotechnology devices. A recognized market and technology leader in wafer-level bonding and lithography for advanced packaging and nanotechnology, EVG's key products include wafer bonding, thin-wafer processing and lithography/nanoimprint lithography (NIL) equipment, photoresist coaters, as well as cleaning and inspection/metrology systems. With state-of-the-art application labs and cleanrooms at its headquarters in Austria, as well as in North America and Asia, EVG is focused on delivering superior process expertise to its global R&D and production customer and partner base – from the initial development through to the final integration at the customer's site. Founded in 1980, EVG services and supports an elaborate network of global customers and partners all over the world, with more than 1200 employees worldwide and fully-owned subsidiaries in the U.S., Japan, South Korea, China and Taiwan. [www.EVGroup.com](http://www.EVGroup.com)



**Markus Wimplinger (Corporate Technology Development & IP Director)** is Corporate Technology Development & IP Director at EV Group. In this role, Markus oversees EV Group's global process and applications engineering team. Additional responsibilities include the management of R&D partnerships and intellectual property affairs for EV Group as a whole. Markus received his electrical engineering degree from HTL Braunau and has been with EVG since 2001, serving in different roles with increasing responsibilities. Markus is inventor on more than 50 patent families.





Evatec, as the worlds of semiconductor and photonics converge, is combining its know-how in the thin film process control know how essential for deposition of high performance optical layers with its know-how in the automated substate handling and particle level control required for thin film semiconductor applications on silicon. The CLUSTERLINE® family of 200 and 300mm tools offer fabs semi standard compliant fully automated, cassette to cassette manufacturing platforms for new approaches in silicon photonics. [www.evatecnet.com](http://www.evatecnet.com)



**Majid Sarhangi (Technical Market Manager)** joined Evatec in 2020 and is currently technical market Manager in field of Photonic. Majid received his master's degree (MS, Mechanical engineering) from the Polytechnic University of Milano in 2015, MBA in Germany in 2019 and continued as a Sales Manager in Evatec Europe GmbH. After that, he moved to marketing department in Photonic Field. He is also very much interested in understanding the growing demand for Silicon Photonics market within the photonics community.



ficonTEC is a recognized market leader for automated assembly and testing systems for high-end photonic components, devices and PICs (photonics integrated circuits). Considerable process capability and dedicated assembly technologies have been accumulated in serving the needs of a broad selection of industry segments – including telecom and datacom, high-power diode laser assembly, sensing from bio-med to automotive, micro-optics, and more. [www.ficontec.com](http://www.ficontec.com)



**Malte Ennen (Sales Engineer)** graduated from Carl von Ossietzky University Oldenburg in 2017 with focus on engineering physics and photonics. He carried out research in the field of system design and concepts for laser micro processing machines. After leaving academics, he served as a project manager at Pulsar Photonics to develop custom laser machines for micro processing applications and as sales engineer at SmarActs metrology division where he was strongly involved in projects regarding semiconductor and fundamental research applications. At ficonTEC he is responsible for discussing requirements and proposing solutions to customers applications.



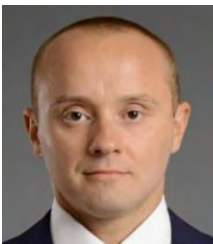
**Torsten Vahrenkamp (CEO)** holds a Diploma for Applied Laser Technologies from the University of Applied Sciences in Emden, Germany. During further work at the Institute of Laser Technology in Emden and at the University of Loughborough, UK, he built a fully automated laser lithography system for rapid generation of microstructures in sub-micron dimensions. He also developed a process to generate the world's first in-glass diffractive optics using ion exchange processes in gradient refractive index glass – a process that is still used today for the generation of waveguides in glass. Torsten is Chief Executive Officer of ficonTEC and, together with CFO Matthias Trinker, one of the co-founders of the company. When founding the company in 2001, the goal was to provide fully and semi-automated assembly and test solutions for the photonics industry.



finetech



Finetech, since its foundation in 1992, has evolved into a leading global supplier of micro assembly and SMD rework equipment for customers involved in microelectronics. Finetech's sub-micron bonding equipment supports the most precise and complex applications. Facilitating innovation and boosting new product developments have always been driving forces at Finetech. In order to support customers at the development stage, and help them transition their processes into production, Finetech has been focusing on efforts to expand its portfolio of automated bonders. Finetech works in close partnership with customers - many have grown in parallel with us, forming countless productive relationships over the years. The company serves a broad range of industries, including Datacom & Telecom, Industrial Semiconductor, Consumer Electronics, Medical Technologies & Life Sciences, Aerospace & Avionics, Automotive, Defense & Security, Energy, as well as universities and research facilities. With subsidiaries on three continents and an extensive global network of representatives, Finetech ensures quick response times, fast on-site service and personal consultation at all times. [www.finetech.de](http://www.finetech.de)



**Matthäus Banach (CTO)** is a Chief Technology Officer & Member of the Executive Board at Finetech. He is experienced development & project manager with a demonstrated history of working in the semiconductor & automotive industry. Highly skilled in project management methods, lean management, general management and R&D. Strong portfolio, program and project management professional with a Master of Business Administration and 3.9 GPA.

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**Uwe Linss (Director of Sales EMEA)** had been working for almost 10 years in SIECOR/Corning Optical Fibers (since 1992) after finished study Technical university in Leipzig. In 2002, he changed into LEONI Fiber Optics, as key-account manager in first 10 years but was nominated and appointed to lead this companies APAC sales and business development activities, being successful and with huge growth. Since 2021, he is managing and being responsible for FOCUZ Manufacturing and new customers and projects in EMEA, and an organic growth of sales and market share in Europe. Main market access is focused by

semiconductor and packaging markets, sensor and CMOS or line sensor applications, and bio-medical market, too. He is located and live in Thuringia/Germany, and collaborating with German and European customers and new projects from there.

Fraunhofer Institute for Applied Solid State Physics IAF is one of the few world-leading research institutes with expertise encompassing the entire value chain in the field of III-V semiconductors and synthetic diamond. Based on these materials, Fraunhofer IAF develops components for future-oriented technologies, such as electronic circuits for innovative communication and mobility solutions, laser sources and detectors for photonic applications, novel hardware components for quantum computing as well as quantum sensors for industrial applications. With its clean room of 1000 m<sup>2</sup>, a 450 m<sup>2</sup> MOCVD machine hall and additional laboratory space covering 3900 m<sup>2</sup>, the Freiburg research institute covers all steps from simulations, materials research, design and processing, metrology to modules, systems and demonstrators. [www.iaf.fraunhofer.de](http://www.iaf.fraunhofer.de)



**Deborah Mohrmann (Business Developer)** received a diploma in biology from the Albert-Ludwigs-University in Freiburg in 2011 and worked as a researcher in the field of materials science at the Fraunhofer Institute for High-Speed Dynamics and the University of Freiburg from 2012. In 2019, she additionally completed her Master of Business Administration at Furtwangen University and joined Fraunhofer IAF. Here she is responsible for the Business Development of Optoelectronics and Quantum Technologies.

Fraunhofer Institute for Reliability and Micro-integration specializes in applied and industrial contract research on packaging technology and the integration of multifunctional photonics and electronics into systems. The institute covers all the competencies needed for advanced photonic packaging, such as, process development and qualification, and reliability and failure analysis with specific links to 3D wafer level packaging, silicon and glass interposer and 3D heterogeneous integration. Optical interconnection technologies, such as, photonic design, fiber optics, PIC integration, electrical-optical printed circuit boards and laser module assembly, system test are fields of excellence. The institute has a staff of more than 300 and earns 90% of the turnover through contract research. [www.izm.fraunhofer.de](http://www.izm.fraunhofer.de)



**Tolga Tekin (Group Manager)** has received the Ph.D. degree in electrical engineering and computer science from the Technical University of Berlin, in 2004. He was a Research Scientist with the Optical Signal Processing Department, Fraunhofer HHI, where he was engaged in advanced research on optical signal processing, 3R-regeneration, all-optical switching, clock recovery, and integrated optics. He was a Postdoctoral Researcher on components for O-CDMA and terabit routers with the University of California. He worked at Teles AG on phased-array antennas and their components for skyDSL. At the Fraunhofer Institute for Reliability and Microintegration (IZM), he then led projects on optical interconnects and silicon photonics packaging. At the Technical University of Berlin, he then engaged in microsystems, photonic integrated system-in-package, photonic interconnects, and 3-D heterogeneous integration research activities. He is Manager of Photonics and Plasmonics Systems Group at Fraunhofer IZM and coordinator of PhoxLab - European Photonics Innovation Hub for Optical Interconnects at Fraunhofer IZM. He coordinated European Flagship project on optical interconnects 'FP7-PhoxTroT', and is currently coordinating 'H2020-L3MATRIX' and 'H2020-MASSTART'.



Huawei, founded in 1987, is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. We have nearly 195,000 employees, and we operate in more than 170 countries and regions, serving more than three billion people around the world. Huawei's end-to-end portfolio of products, solutions and services are both competitive and secure. At Huawei, innovation focuses on customer needs. We invest heavily in basic research, concentrating on technological breakthroughs that drive the world forward. [www.huawei.com](http://www.huawei.com)



**Changsong Xie (Senior R&D Manager)** has been engaged in the research and development of optical-fibre Communication systems and short reach optical interconnection modules over 20 years. Since 2008, he has been the technical leader of the Optical and Quantum Communication Lab, Munich Research Center, Huawei Technologies Dusseldorf. He took part in the design of Huawei's 100G/200G/400G coherent optical transport solutions. He is also one of the designer of Huawei DCN 400G/800G optical module. Before joining Huawei, he worked for Siemens Corporate Technologies, Information and Communication, Nokia Siemens Networks as research engineer for long haul and metro optical transmission.



**Yasar Kutuvantavida (Senior Engineer)** received M.Sc. in Physics from the Indian Institute of Technology (IIT) and Ph.D. in Photonics from Massey University New Zealand. He was part of Victoria University of Wellington, Callaghan Innovation New Zealand, and University of Wollongong Australia until 2014. He joined Karlsruhe Institute of Technology (KIT), Germany in 2014, to work on silicon-organic and plasmatic-organic hybrid electro-optic modulators. He is with Huawei since 2019, at Huawei Weilheim Manufacturing Technology Center (WMTC), active in precision packaging and hybrid integration (R&D) of optics and photonics components.

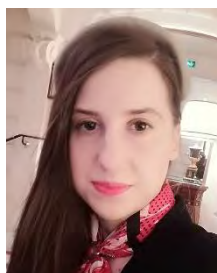


ICON Photonics has developed a wafer-level integration platform combining a Silicon Optical bench and a unique on wafer polymer microoptics technology. This platform is ideal to create custom and reliable optical micro-benches integrating fiber coupling and attaching solutions as well as high-speed electrical interconnects, enabling the next generation connectivity addressing the optical transceiver market and the Quantum photonics markets. [www.icon-photonics.com](http://www.icon-photonics.com)



**Jean-Luc Polleux (Co-founder & CTO)** is cofounder and CTO of ICON Photonics. He received his PhD degree from the Cnam in 2001. From 2001 to 2022, he was associate professor at ESIEE-Paris, CCIR Paris IdF, Université Gustave Eiffel, France, and researcher in the CNRS joint laboratory ESYCOM (UMR-9007). His research involved microwave and photonic devices with special emphasis on Silicon-based integration, high-speed photonic interconnects, microwave phototransistors (SiGe/Si and InGaAs/InP), analogue VCSELs and opto-microwave modelling. In 2018, he cofounded ICON Photonics as a spin-off of his research activities at ESIEE Paris and ESYCOM. Jean-Luc is a member of the administration board of the Hub Optics/Photonics - Systematic cluster.

Imagine Optic is a provider of Shack-Hartmann wavefront sensing hardware and software, adaptive optics technologies and professional services in applied optics. The company works with scientists and industrials in domains including pure science, industrial quality control, space and defense, semiconductors and many others. From X-EUV to NIR wavelengths, we develop, manufacture, distribute and support a very large range of wavefront measurement and correction technologies. From augmenting resolution in bioimaging applications to improving beam shape and propagation for ultra-high intensity lasers, we have the hardware and software to meet customer needs. [www.imagine-optic.com](http://www.imagine-optic.com)



**Algita Stankevičiūtė (Sales Engineer)** is a sales engineer at Imagine Optic since September, 2022, working on customers around Europe, regarding wavefront metrology, more importantly Shack-Hartmann wavefront sensing technology, combining her engineering, research expertise with sales. She graduated her Masters in 2018 in Applied Physics at Kaunas University of Technology and will receive her PhD in Observational Astronomy at the University of Warsaw. Before joining Imagine Optic, she was working in research projects, involving Extremely and Very Large Telescopes Adaptive Optics systems, collaborating with different space research institutions and agencies.

iPronics, Programmable Photonics is a spinoff company from the Universitat Politècnica de València, Spain. iPronics develops the innovative concept of Field Programmable Photonic Gate Arrays (FPPGAs), which are based on a common optical hardware configurable through software to perform multiple functions. iPronics contributes to the development of future information processing systems where electronics and photonics work cooperatively by synergistically exploiting the best capabilities of each technology. It brings the added value of optical reconfigurability to products with broad fields of application including 5 and 6G telecommunications, data center interconnection, artificial intelligence, signal processing, sensing and quantum information. [www.ipronics.com](http://www.ipronics.com)



**José Capmany (Co-founder & Professor)** is a Full Professor in Photonics and leader of the Photonics Research Labs at the institute of Telecommunications and Multimedia Applications, Universitat Politècnica de Valencia, Spain and cofounder of iPronics. He holds BSc+MSc degrees and doctorates in Electrical Engineering and Physics. He has published over 600 papers in international refereed journals and conferences. He is a Fellow of the Optical Society of America (OSA) and the Institute of Electrical and Electronics Engineers (IEEE). He was also a cofounder of VLC Photonics (acquired by Hitachi in 2020). Jose is the 2012 King James I Prize Laureate on novel technologies and the National Research award in Engineering 2020, the two highest scientific distinctions in Spain, for his outstanding contributions to the field of microwave photonics. He has also received the Engineering achievement award from the IEEE Photonics Society and the Innovation prize from the Royal Society of Physics in Spain. He is an ERC Advanced and Proof of concept grantee.

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**LaserPoint**, founded in 1987, develops and manufactures a complete line of instrumentation for the measure of laser power/energy and customized laser systems that serve manufacturing, medical and research industries. All key technologies are in-house developed. The Company holds several patents (e.g. on techniques to measure Power, Beam Position and Diameter on a single instrument). Well known for the robustness of its coatings and products, LaserPoint has a long record of innovations in laser measurement: High Speed Laser Sensor ("Blink series" patent pending) able to measure pico/femtosecond pulsed lasers up to 1 MHz repetition rate, world's First Super Hard Coating (SHC) for multi-kW high brightness lasers, world's first Air Cooled detector for 1.2 KW, world's First Power Probes based on the measurement of fast temperature transients in thermal sensors. As a result of the extremely high quality of its products, LaserPoint has been world's first in providing a 3 Years Standard Warranty for Laser Measurement Products. [www.laserpoint.eu](http://www.laserpoint.eu)



**Andrea Brinciotti (Partner & CEO)** has MS in Physics (University of Rome "La Sapienza"): expert in laser technologies and instruments for Laser diagnostics, power and energy meters, fibre optics transmission systems. During his professional lifetime he was in charge as R&D Director and Business Unit Director in primary companies developing Photonics systems for telecommunication and industrial sectors.



**Daniele Zanato (Sales Manager)** has received his Ph.D. in Electronic Systems Engineering at the University of Essex, where he worked on the Optoelectronic properties of Group III-N Semiconductors and devices. Before joining LaserPoint, Daniele held various positions at different distribution companies and manufacturers. He has got, up to date, more than 15 years' experience in Sales, Marketing and Business Development in the Photonics Industry.



Laser Components, since its establishment in 1982, has always defined itself as a solution provider for optical and optoelectronic technologies. The customer spectrum of the owner-managed family company covers all industries that utilize light. With more than 260 employees at seven locations on two continents, the company group generates around 60 percent of its sales with products from its own production including laser optics, avalanche photodiodes, pulsed laser diodes, IR detectors, pyroelectric detectors, laser modules, photon counters and fiber optic assemblies. [www.lasercomponents.com](http://www.lasercomponents.com)



**Florian Blobner (Chief Product Officer)** is the Chief Product Officer of Photona GmbH, the holding company of the Laser Components group. He holds a PhD degree in physics from the Technical University of Munich and joined Photona beginning of 2022. Before that, he worked in various roles for product management and sales in the Photonics and sensor industry.



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LIDROTEC's unique innovation are specifically designed liquids that

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Due to the liquids, we achieve narrow kerf widths without micro cracks, without chipping, without thermal defects and without debris on the surface. As a consequence, the dicing yield is increased to >99%. Our technology can be used for glass/ceramics and semiconductor materials.

[www.lidrotec.de](http://www.lidrotec.de)



**Jan Hoppius (CTO)** is CTO at Lidrotec GmbH. With his 10 years experience in laser micro machining in liquid environment, he is in charge of software and hardware development for ultra high precision cutting applications. Cutting kerfs of less than 20µm width as well as burr-free and microcrack-free processing on any material stacks are his specialities.

LIGENTEC is a Swiss based manufacturing partner, offering low loss SiN Photonic Integrated Circuits (PICs) for industries such as quantum technologies, LiDAR, communications, space and sensors. Due to its high confinement, the thick nitride waveguides and resonators have low bending losses and excel even in high power applications from the visible to the mid-IR. The main application areas for this advanced silicon photonics low loss technology include coherent telecommunication, LiDAR, metrology, supercontinuum generation, spectroscopy, sensing and microwave photonics. Ligentec's All Nitride Core Technology platform is fully CMOS compatible, thus allowing us to offer ramping up to high volumes benefiting from the scale of the semiconductor industry. [www.ligentec.com](http://www.ligentec.com)



**Thomas Hessler (CEO)** studied at the University of Constance (Germany) and Imperial College London (UK). He received his Diploma in Physics in 1994 and his PhD in Applied Optics from the University Neuchâtel (Switzerland) in 1997. From 1998 to 2019, he started as employee No 1, led as general manager and grew the corporate start-up Axetris to 130 people and market leadership in wafer level micro-optics and gas sensing. Recently, he joined Ligentec SA as a late Founder to support the scaling of this high potential company. Besides his general management experience to navigate in a complex, multi-disciplinary, multi-market, high investment, high-tech OEM business environment, he has profound experience in a variety of photonics and non-photonics technologies (sensors, infrared gas detection, MEMS, micro-optics and micro-fluidics) and markets (automotive, medical, telecom, analytical, industrial).



LioniX International is a leading global provider of customized microsystem solutions. We have driven technological and commercial development in photonic integrated circuits since 2001. We work with OEMs and system integrators, using a vertically integrated approach to support all stages of the production process, from design to delivery of a finished module. And with world-class fabrication facilities, we scale production volumes as customer requirements grow. Our ability to deliver innovative modular solutions based Photonic Integrated Circuits (PICs), lies in our strong IP portfolio. This includes our proprietary waveguide technology-TriPleX™-as well as the fundamentals of our competences in micro-fluidics, opto-fluidics and MEMS. [www.lionix-international.com](http://www.lionix-international.com)



**Arne Leinse (CEO)** is active in integrated optics for more than 20 years. He received a PhD degree from the University of Twente in the integrated Optical Microsystems group in 2005. Hereafter, he joined LioniX BV where he was involved in the invention and development of the TriPleX™ platform from the beginning. He has been involved from the original concept until the exploitation and (co)authored over 100 articles in the last years. He has been active as Vice-President of LioniX BV in the last years and since the establishment of LioniX-international in 2016 active in the role of Chief Commercial Officer. Since January 2020 Arne is active in the role of CEO, leading the Management Team.





**Menlo Systems** is a leading developer and global supplier of instrumentation for precision metrology on the highest level. Based in Martinsried near Munich, Menlo Systems is known for its Nobel Prize winning optical frequency comb technology. Their main product lines are optical frequency combs, solutions for time and frequency distribution, ultrastable lasers, terahertz systems, and femtosecond lasers. Menlo Systems deliver state-of-the-art products to customers from industry and academia worldwide. To push the limits of the measurable, Menlo Systems work closely with selected customers and develop new solutions for laser-based precision measurements. [www.menlosystems.com](http://www.menlosystems.com)



**Richard Zeltner (Executive Assistant and Project Leader)** obtained his PhD from the University of Erlangen-Nuremberg, Germany on photonic crystal fibers and their applications. He joined Menlo Systems in 2019 as an executive assistant and project leader. Among others, his tasks at Menlo include the establishment of new R&D collaborations and technology partnerships.



**Merck**, a leading science and technology company, operates across healthcare, life science and electronics. Around 58,000 employees work to make a positive difference to millions of people's lives every day by creating more joyful and sustainable ways to live. From advancing gene editing technologies and discovering unique ways to treat the most challenging diseases to enabling the intelligence of devices – the company is everywhere. In 2020, Merck generated sales of € 17.5 billion in 66 countries. Innovation in Electronics is driven at the atomic level. We develop science that sits inside technologies and changes the way we access, store, process, and display information. Our contributions to the electronic industry help enable high-tech materials and solutions that are vital to our everyday lives, like smartphones, the Internet of Things and autonomous driving. Working in partnership with leading global players, we develop materials that help enhance each new generation of products, making them smaller, faster, smarter and better connected. Electronics starts with us. We are the company behind the companies advancing digital living. [www.merckgroup.com](http://www.merckgroup.com)



**Messe München** is one of the leading exhibition organizers worldwide with more than 50 of its own trade shows for capital goods, consumer goods and new technologies. The LASER World of PHOTONICS has developed an international trade fair network. The LASER World of PHOTONICS in Munich is the world's leading laser and photonics trade fair and as the innovation pacemaker is where the global photonics industry gathers every two years. The LASER World of PHOTONICS CHINA and the LASER World of PHOTONICS INDIA are leading regional trade fairs for laser and optical technologies and are staged annually in China (Shanghai) and in India (alternating between Bengaluru, Mumbai and New Delhi). With a total of more than 2,600 exhibitors and around 100,000 visitors at these trade fairs in Munich, China and India, Messe München is the world's leading trade fair organizer for lasers and photonics. [www.messe-muenchen.de](http://www.messe-muenchen.de)



**Modulight** is an ISO9001, ISO14001 and ISO13485 certified company focusing on design, development and manufacturing of laser diodes and laser systems. Modulight lasers are deployed mainly in medical, industrial, security/defence and display/projection markets. The company provides components and turnkey laser systems with wavelengths range between 405 nm and 1650 nm and power levels up to 100 W along with design and implementation of sub-system level laser integration including cooling, drivers and mechanical design. The products are offered from bare and mounted laser chips to packaged and fibre-coupled lasers and complete turnkey laser systems. The Company has in-house laser diode production facilities and headquarters in Tampere, Finland and a fully owned subsidiary Modulight USA, Inc., based in San Jose CA. [www.modulight.com](http://www.modulight.com)



**Kalle Palomäki (Member of the Board of Directors)** is the Member of the Board of Directors of Modulight since 2013. He holds Master of Science (Computer Science), MBA.



**Petteri Uusimaa (Founder and CTO)** holds a PhD in semiconductor physics from Tampere University of Technology. Prior to joining Modulight, he held numerous manager positions in international research projects in which he managed relations to international funding companies as well as was the principal scientist in the programs. Since 1997, Petteri has been managing semiconductor sales to multinational companies and acted as a President & CEO of Modulight until 2019 when he took the position of Chief Technology Officer. He has been a member of Modulight board since incorporating the company in 2000.



**Ocean Insight** reflects our evolution from one of many suppliers of spectroscopy products to a singular provider of Applied Spectral Knowledge. Our purpose is to help customers define pressing challenges and deliver answers that promote a safer, cleaner, healthier future. Ocean Optics invented the miniature spectrometer, pioneering the concept of bringing the measurement to the sample. Now, your changing needs have inspired us to embrace new ways of innovating, collaborating and problem-solving. As Ocean Insight, we bring application-specific expertise, services, and solutions to define and solve important challenges across multiple industries and disciplines. We invite you to explore our integrated approach to customer need. We call it Applied Spectral Knowledge (ASK) - innovative spectroscopy hardware, software, and on-demand data delivery backed by deep category expertise. More simply, we're turning spectra into answers. [www.oceaninsight.com](http://www.oceaninsight.com)



NTS Optel, since 1986 based in Nijmegen the Netherlands, is a contract manufacturer that develops, produces, assembles and tests complex (opto-)mechatronic systems. We serve the following applications areas: Illumination (medical illumination; machine vision illumination; fiber illumination; and general illumination); Imaging (custom imaging optics; custom cameras; machine vision using custom or off the shelf optics and cameras; microscopy systems; and fluorescence systems); Sensors (custom spectral sensors; custom position or height sensors; and other sensors); Laser beam delivery (scanning; focusing; beam shaping; and beam steering); and Industrial test equipment (these are turn key integrated solutions involving e.g.: frame / cabinet design and production, user interface and machine control software, handling of products, motion control, optical sources and or sensors, and electronics). [www.optel.nl](http://www.optel.nl) or [www.nts-group.nl/en/competences/optical-testers](http://www.nts-group.nl/en/competences/optical-testers)



**Leon Hol (Managing Director)** is the Managing Director NTS Optel since January 1 2022, his whole working life active in the High Tech. Starting from his study Bachelor Mechanics, he stepped into the world of Semiconductor and Photonics. Coop with several Front End and Back End OEM Customers in several roles such as Engineering, Project Management and Sr. Sales Management. He was involved in the early days of EUV and Cryo technology and did several projects both in Litho, Metrology and several Back End process steps. Since January 1 2022, he started as Managing Director of NTS Optel and, together with the Management Team, set an ambitious financial and technology growth plan.

## OKMETIC

Okmetic is the world's seventh largest silicon wafer manufacturer in Vantaa, Finland. Okmetic focuses on high value-add, specialized 150 and 200mm wafers. Some of our advanced products include Bonded SOI with & without cavities, patterned wafers and Very Low and Very High Resistivity (RFSi®) wafers. Okmetic is leading supplier of advanced silicon wafers for MEMS, sensor, RF and power devices. [www.okmetic.com](http://www.okmetic.com)



**Juha Larismaa (Senior Product Development Engineer)** is Senior Product Development Engineer at Okmetic. His role is to lead NPD and external research projects. He received his M.Sc. degree in materials science from Helsinki University of Technology in 2007. Since then, he has worked in various roles in semiconductor industry. He worked 3 years at Murata working on accelerometers and gyros for automotive applications. He also worked as Process Engineer and Senior Yield Engineer at Rockley Photonics developing their Si Photonics platform for Datacomms and Health and Sensing applications.



**PHIX Photonics Assembly** started operations in July 2018. PHIX is offering a cost-effective manufacturing service for Photonic Integrated Circuit (PIC)-based modules in large volumes. PHIX is located at the High-Tech Factory in Enschede, the Netherlands. PHIX offers assembly services for all three major PIC technology platforms (InP, Si and TriPleX) and is specialized in hybrid integration of multiple PICs in one module both with optical fiber interfaces as well as free space optical interfaces through micro optical components. [www.phix.com](http://www.phix.com)



**Joost van Kerkhof (COO)** started PHIX in 2018 together with Albert Hasper (CEO). He has more than 25 years of experience in the micro-nano technology industry. Before starting PHIX, Joost was the CEO of XiO Photonics since 2013 and the COO of LioniX International since the merger of XiO Photonics, LioniX and SatraX into LioniX International in 2016. Before joining XiO Photonics, Joost worked with Sensata Technologies as Director Business Integration. In this role, he built a significant experience in business case analysis and development. Before his role in business management, he has held positions within Texas Instruments (which became Sensata Technologies in 2006) as Director R&D and Director Operations. In these positions, he has brought several products in high volume production. Joost holds a master's and Ph.D. degree in electrical engineering specialized in micro-nano technology and (bio)sensors.

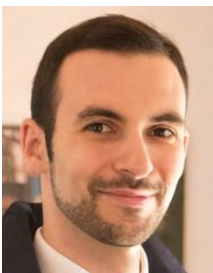


## PHOTONPATH



**PhotonPath** is a European-based designer, manufacturer, and vendor of Integrated Photonics-based optical components and products. Our mission is to create and extend human knowledge. We tackle this challenge with our Integrated Photonics-based devices that obtain, transmit and process the world's information using light. We develop reconfigurable Photonic Integrated Circuits (PIC) for optical-based sensing applications and fiber optics telecommunication networks. Our product portfolio is reliable and competitive as we scale to mass production thanks to PhotonPath's technology stack for automatic chip testing, calibration, and assembly.

[www.photon-path.com](http://www.photon-path.com)



**Emanuele Guglielmi (Co-founder and CTO)** was born in 1991. He received the bachelor's degree (cum laude), the master's degree in electronic engineering, and the Ph.D. degree (cum laude) in electronics from Politecnico di Milano, Milan, Italy, in 2013, 2015, and 2019, respectively. In 2018, he spent six months with the Massachusetts Institute of Technology (MIT), Cambridge, MA, USA, to work on the subject of photonic-electronic integration. From 2019 to 2020, he worked as a Postdoctoral Researcher with Politecnico di Milano. His main research interests include was in the field of integrated photonics developing electronic control systems for complex photonics circuits. He is specialized in high-sensitivity measurements and in the design of custom low-noise readout electronics, having experience in developing discrete component boards (PCB) and CMOS-integrated circuits. He is currently CTO and Co-Founder of PhotonPath, an Italian startup and spin-off of Politecnico di Milano founded in 2019, that designs, manufactures and commercializes Integrated Photonics-based for optical-based sensing, and fiber optics telecommunication networks (including quantum communication).

# PiBond



PiBond is a specialty materials company that focuses on the development and manufacturing of advanced materials for semiconductor, optoelectronic and photonic applications. The three technology platforms that form the offering by PiBond consist of dielectric materials, lithography materials and clear silicone adhesives. Specific applications for dielectrics include semiconductor back-end dielectrics, photo-dielectrics, and optical coatings with wide range of refractive indexes. Our advanced lithography products consist of silicon- and carbon-based underlayer materials, silicon resist materials, and auxiliaries. The silicone adhesives are designed for display and lens applications. The company is ISO 9001/14001 certified and has a +10-year successful track record in global supply to the market. All products manufactured in our clean room meet the most stringent technical and quality requirements, and have been adopted in latest the electronic devices, security cameras and automobiles. [www.pibond.com](http://www.pibond.com)



**Thomas Gädda (CTO)** is the CTO of PiBond, where he leads the teams of engineers and chemists responsible for developing new materials and processes for semiconductor and novel applications in photonics. He also oversees customer projects and product support. Prior to joining PiBond, he functioned as a Research Manager at VTT, Technical Research Centre of Finland. Thomas has a +20-year experience in material development with a focus on silicon-based materials. Among materials he has developed include silicon and metal oxide based optical coatings, dielectrics, resists, and lithography hard-mask materials. He received his PhD in Chemistry from the University of Southern California and MS in Chemical Engineering from the Helsinki University of Technology. Presently, he has ~30 patents and ~50 publications/proceedings.



Plasma-Therm is a global manufacturer of advanced plasma processing equipment. Its tools and processes are used to support manufacturing needs in etch, deposition, material modification, and plasma dicing technologies. The company serves the semiconductor and compound semiconductor industries in developing solutions for the wireless, power device, MEMS, photonics, advanced packaging, and data storage markets. With locations in North America, Europe and Asia-Pacific, Plasma-Therm meets the diverse needs of its customers with exceptional customer service. [www.plasmatherm.com](http://www.plasmatherm.com)



**Thierry Lazerand (General Manager)** is currently the General Manager of Plasma-Therm Europe. He joined Plasma-Therm headquarters in Florida in 2010 after over twenty years spend in various technology and management roles both in device manufacturing and capital equipment companies in France and USA. He relocated in Grenoble, France in 2019 to take responsibility of the EMEA branch of Plasma-Therm, to insure the implementation and execution of the plasma-based solutions Innovation activity and Product Management serving worldwide Universities and R&D centers.

Posalux is a Swiss machine tool manufacturer offering outstanding micro machining solutions to its worldwide customers. Through our Femto-LASER machining technology, we develop drilling, routing/milling, cutting, and turning applications for the electronics, automotive and industrial markets. Our high-performance machines are well known for their long-lasting quality and reliability within mass production environment. With our subsidiaries based in Taiwan, South Korea, USA, Germany and Italy, together with our worldwide network of sales and service agents, we are close to our customers and serve them locally. Our dedicated support from the first phase of the project to the production ramp-up, assures the best performance out of our equipment. Founded in 1943, Posalux is headquartered in Biel/Bienne, one of the most important cities of Switzerland, which is not only famous as a watch metropolis, but also as one of the most important center for advanced micro-technologies. [www.posalux.com](http://www.posalux.com)



**Amiel Lopes (Laser Applications Engineer)** is a laser process development engineer with hands-on experience in advanced manufacturing techniques and laser processes including micro-machining, micro-scribing, micro-marking, micro-drilling, micro-welding, texturing of surfaces, selective removal of material or coatings, processing composite materials, development of sensors, photovoltaic cells. He completed his Ph.D. at Heriot-Watt University in Edinburgh. During his Ph.D., he worked on ultrafast laser-based micromachining of glass materials. During his Ph.D., he developed a novel machining technique (patented) for the machining of the micro-optics at high speeds on materials like Fused silica, N-BK7, and high index glasses.



Q.ANT is a high-tech start-up, founded in 2018. Q.ANT's vision is to revolutionize the quality of how machines analyze their environment, how people process information, and how human think. To reach this vision, Q.ANT develops quantum sensors and quantum computing chips based on its Quantum Photonic Framework. Focusing on its four product lines of Photonic Computing, Particle Metrology, Atomic Gyroscopes and Magnetic Sensing, the company engages with a broad array of industries and applications ranging from medical technology and autonomous vehicles to aerospace and chemical engineering. Q.ANT employs more than 60 people at its site in Stuttgart. [www.qant.de](http://www.qant.de)



**Michael Förtsch (CEO)**, after studying mathematics and physics, earned his doctorate at the Max Planck Institute for the Physics of Light. For his scientific achievements in the field of quantum information processing, he was awarded the Otto Hahn Medal. After an international research stay at the National Institute for Standards and Technology in Boulder, he started as a strategy consultant at TRUMPF GmbH + Co. KG in 2015. In 2018, Michael founded Q.ANT, a start-up developing photonic quantum technologies. Q.ANT's product developments include sensors for autonomous driving as well as for human-machine interaction and photonic quantum computing. Recently, he was appointed as a member of the Program Committee Quantum Technology of the Federal Ministry of Education and Research (BMBF).



Quality Photonics Optics

Quality Photonics Optics (QPO) is a technological company focused in generate new business using his knowledge in thermoplastics encapsulation and embedding thermoplastic lenses as market penetration tool. Our mission is to develop technologies and manufacturing processes for optical embedding photonics components and systems' assembly with added-value and profitable business. Our vision is to become a worldwide reference in the business of optical thermoplastics encapsulation and embedded thermoplastic lenses. [www.qpolens.com](http://www.qpolens.com)



Quantum Dice is an exciting new Oxford University spin-out commercialising an innovative, device-independent and self-certifying true quantum random number generator. The QRNG will be an integrated on-chip device which generates cryptographically secure random numbers based on a patented method from Prof. Ian Walmsley's group. Quantum Dice's technology is focused on securing key generation in the encryption market, to future proof the security of information. The team was established in July 2019 as the winning team of Oxford University Innovation's inaugural StEP Ignite Programme, raising initial funding from Oxford Science Innovation within a month of formation. [www.quantum-dice.com](http://www.quantum-dice.com)



RefleKron is a premier provider of customized semiconductor saturable absorber mirrors (SESAMs). Every laser needs a unique SESAM for optimal performance, repeatability and long lifetimes. We address this need with a full product qualification cycle ensuring stable supply for volume production of pulsed laser systems. We offer a unique combination of semiconductor technology expertise, in-house epitaxy, SESAM design and characterization, and extensive knowledge in laser physics gained since our establishment in 2004. Our technology enables to develop SESAMs for both mode-locking and Q-switching applications, covering a wavelength range from 0.6  $\mu\text{m}$  to 3  $\mu\text{m}$ . [www.reflekron.com](http://www.reflekron.com)



Eero Koivusalo (COO) joined RefleKron in 2019 to lead the production operations and to enlarge the products portfolio to a broader application base. He completed PhD in Physics from Tampere University in 2020 in the field of molecular beam epitaxy. He has gained extensive expertise in the design of III-V semiconductors, laser physics, and SESAM technology. Eero acts as the primary customer contact point for new product developments and volume scale up.

SCINTIL Photonics is a fabless company that develops silicon photonic integrated circuits. SCINTIL solutions combine the best of Silicon (Si) and Indium Phosphide (InP) materials using wafer-scale bonding of InP on Si and rely on commercial silicon foundry processes to build fully integrated photonic circuits (comprising multi-wavelength lasers, waveguides, wavelength filters, and photodetectors). [www.scintil-photonics.com](http://www.scintil-photonics.com)



**Pascal Langlois (Co-founder and Chairman)** cofounded Scintil Photonics on November 2018 with Sylvie Menezo president and CEO. He is serving as chairman of the board. Most recently, Langlois was President and CEO of Tronics Microsystems, a Mems company he introduces in 2015 on Euronext Stock market, and which was acquired by TDK Group end of 2016. Prior to that he was Chief Sales and Marketing Officer at ST-Ericsson and from 2006, Founder of NXP and part of the executive management team responsible for global sales. He was previously with Philips Semiconductors BV, where he served in various capacities, including Senior VP of Sales and Marketing for multimarket products and VP of the automotive global market segment. He also worked with VLSI Technology, where his last position was VP for Europe, Asia Pacific and Japan operations. Pascal graduated with a Bachelor in technology from the University of Paris, and attended strategy and organization executive program from Stanford University. Langlois is also Chairman of supervisory board of Teem Photonics, an industrial laser company and Director of Yole Development, a market research firm.

SnellOptics was founded in 2003 as a spin-off of the center for Research and Technology Transfer CD6 (Centre for Sensor, Instrument and Systems Development). Their previous history as a research group brings to the staff knowledge and dedication to meet the technological challenges that arise in the development of our business. The company's experienced team of scientists and engineers, with extensive research and industry experience, offers to the company the following: high-quality products and faultless customer service, large capability to develop custom applications and diverse optical design projects and flexibility to adapt our business to the market needs. Within the broad field of optics, SnellOptics is well known for its high quality products and services. We have three product lines in continuous development: Plastic Optics (designs plastic optics for LED lighting), Instrumentation (measuring instruments ready to use), Engineering Projects (high expertise in viability, study and development of engineering optics projects). [www.snelloptics.com](http://www.snelloptics.com)



**Carles Pizarro Bondia (CEO)** is the Business Manager of SnellOptics since 2009. He received a PhD in Optical Engineering from the Technical University of Catalonia (2002). His main research activity is in the field of optical design in the Centre for Sensor Systems and Instrumentation (CD6) of the Polytechnic University of Catalonia (UPC). He participated in several publicly funded projects and partnership contracts with companies for technology transfer into 30 projects (six linked to government agencies and 24 to private companies). He has published articles in international journals and has made presentations at numerous international conferences. He will be the person in charge of scientific and technical aspects for the assigned tasks.



**Silicon Austria Labs (SAL)** is an Austrian research center for electronic based systems (EBS). The application-oriented center offers cooperative research in the areas of Sensor Systems, RF Systems, Power Electronics, System Integration Technologies, and Embedded Systems and develops technologies for Industry 4.0, Smart Health, IoT, MEMS, MOEMS, energy, or lifestyle. SAL has extensive experience and competencies in macro- and micro-optics and integrated photonics for miniature optical sensors and multifunctional sensing systems, covering the whole R&D chain of simulation and system design, device fabrication and testing, photonic assembly and system integration, as well as the development and application of novel sensing concepts. SAL's R&D photonic projects bridge the gap between fundamental research and application with advanced technologies focusing on major industrial markets including quantum sensors, environmental sensors, non-linear spectroscopy and spectroscopic sensors, smart lighting and imaging systems, LIDAR and remote sensing systems. [www.silicon-austria-labs.com](http://www.silicon-austria-labs.com)



**STMicroelectronics** is a global semiconductor company with net revenues of US\$ 9.66 billion in 2018. Offering one of the industry's broadest product portfolios, ST serves customers across the spectrum of electronics applications with innovative semiconductor solutions for Smart Driving and the Internet of Things. By getting more from technology to get more from life, ST stands for life.augmented. To keep its technology edge, ST maintains a strong commitment to innovation, with approximately 7,400 people working in R&D and product design and spending about 15 % of its revenue in R&D in 2018. Among the industry's global technology leaders, ST owns and continuously refreshes a substantial patent library (~18,000 patents; ~9,500 patent families and ~500 new patent filings in 2018). ST delivers specialized and differentiated imaging solutions for a variety of applications, leveraging extensive expertise in optical modules and image sensors and a continuously expanding portfolio of proprietary technologies. We provide access to advanced Imaging technologies through our CMOS Image Sensor (CIS) foundry services. [www.st.com](http://www.st.com)



**Frédéric Boeuf (Technical Director Photonics Innovations)** obtained his M.Eng. and M.Sc. degree from Institut National Polytechnique de Grenoble in 1996 and Ph.D. in condensed matter physics from the University of Grenoble in 2000. Then he joined STMicroelectronics in Crolles, working on Advanced Devices Physics and Integration. He led the 65nm and 45nm research program as well as the UTBB and FDSOI research program between 2006 and 2012. He also led the development of MASTAR road-mapping tool used by the ITRS for more than 10 years. Since 2011, he's leading the Silicon Photonics program in STMicroelectronics Crolles and especially the development of 100G and 400G Silicon Photonics platforms. In 2016, he was invited researcher at the University of Tokyo. He authored and co-authored over 250 technical papers and 6 book chapters. He is recipient of General Ferrie french Award 2012 for his work on FDSOI, SSDM best paper award 2017, and best paper award from the Silicon Technology Division of the Japanese Society of Applied Physics in 2018. He was appointed regional fellow in 2018 and is currently Photonics Innovation Technical Director inside STMicroelectronics's Technology and Design Platform organization.



**Sivers Photonics** is the world's most advanced supplier of customised III-V semiconductor photonics devices, enabling next generation applications in fast growth optical communications and sensing markets and a key strategic supplier to many Fortune-100 and Silicon Valley customers. With over 20 years of expertise designing and manufacturing III-V photonic devices for a diversity of material systems, our foundry provides end-to-end in-house capability, from prototype design to qualified high-volume manufacturing, with a particular focus on InP sources optimised for silicon photonics integration. We offer customisable high power InP-based DFB lasers and gain chips, as single emitters or arrays, with complete in-house capability from epitaxy design to qualification. Our line is fully qualified for 4" wafer processing with high yield. [www.sivers-semiconductors.com/sivers-photonics](http://www.sivers-semiconductors.com/sivers-photonics)



**Iain Eddie (Director of Device Engineering)** joined Sivers Photonics (then CST Global) in 2006 as a Device Design Engineer, after completing an MEng in Electrical and Electronics Engineering and a Ph.D. in Photonics at the University of Glasgow. His research was in the design, fabrication and characterisation of VCSELs with carrier confinement by Quantum Well Intermixing. During his 16 years at Sivers, Iain has led many major projects, most recently focusing on InP sources for silicon photonics applications. As Director of Device Engineering, Iain leads the Device Engineering Team, responsible for the development of new device designs and implementing Sivers technology platform strategy.



**Synopsys** is accelerating the adoption of photonic IC technologies with the industry's first unified solution, which includes the Synopsys OptoCompiler™ electro-optical IC design solution, the Synopsys OptSim™ simulation solution, and Synopsys Photonic Device Compiler for photonic device design and PDK development. Synopsys Photonic Solutions offer a seamless and unified design platform to help IC designers and photonic engineers innovate next generation of communications, sensing, and imaging solutions. [www.synopsys.com/photonic-solutions.html](http://www.synopsys.com/photonic-solutions.html)



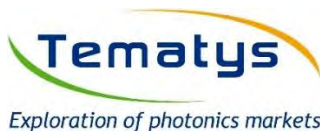
**Twan Korthorst (Group Director Photonics Solutions)** is Group Director of Photonic Solutions at Synopsys. He has been active in the field of chip design and fabrication for non-traditional semiconductor micro and nano technologies for over 25 years. After roles in product engineering and fabrication, he joined Phoenix Software in 2007 and developed the company into a leading supplier of design solutions for photonic ICs in his role as CEO. In February 2018, Synopsys acquired Phoenix Software, bringing together the industry's widest portfolio of solutions for designing and manufacturing photonic devices, optical systems, and photonic integrated circuits within one organization and one single support channel. Twan is responsible for the integrated photonics strategy across the company leads the team developing the Photonic IC Solutions.



Synova is an experienced supplier of state-of-the-art laser solutions for industrial micro-machining applications, serving the semiconductor, electronic, energy and medical markets. As the inventor of laser dicing technology, Synova– through its proprietary Laser MicroJet® (water-jet-guided laser) technology– is fast emerging as the ideal provider for addressing the exacting manufacturing specifications and low cost of ownership requirements associated with the volume production of today's advanced electronic devices. With its headquarters in Duillier, Switzerland, Synova is a privately-owned company with subsidiaries in North America and in the Asia/Pacific region. [www.synova.ch](http://www.synova.ch)



**Amédée Zryd (Director R&D)** is managing the R&D and application teams at Synova since 2018. He has almost 30 years experience in various industries, ranging from the machine tool to the medtech and energy sectors, as well as teaching material science in the Technical University of Western Switzerland. He graduated in Physics from the Swiss Federal Institute of Technology in Lausanne and earned his PhD in 1991 in Zürich. Since 2021 he is also expert at Innosuisse, and committee member of Swissmem Photonics sector since 2022.



Tematys provides a complete range of services to companies and public organizations in the fields of optics, photonics, sensors and material Engineering. Our clients are companies of any size, from international groups to SMEs and start-up. We have also developed a special expertise in R&D valorization and marketing of emerging technologies for Research Organizations and Laboratories. We provide strategic views on optics and photonics markets for publics for clusters and publics agencies. [www.tematys.com](http://www.tematys.com)



**Benoît d'Humières (Partner)** graduated in Physics and Chemistry from the ESPCI Paris – PSL and Sorbonne University. He is an expert in Optics, Electronics and Instrumentation for industrial and research applications. In 1991, after some years of research at the University of Florida, he became an innovation consultant. He has run many marketing and technological studies for companies of any size and Research institutions. Benoît has also taught the marketing of photonic technologies at the Institut d'optique-Graduate School (Palaiseau, France).



TRUMPF is a family business. We think and act with a long-term perspective. Our core business is manufacturing solutions in the fields of machine tools and laser technology. These are used in the manufacture of the most diverse products, from vehicles, building technology and mobile devices to state-of-the-art power and data storage. Our consistent internationalization is one of our success factors. We are active with own subsidiaries in those markets, where our customers are. Our creative will fosters our promise for constant innovative power. [www.trumpf.com](http://www.trumpf.com)



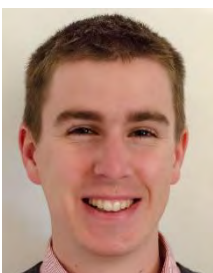
**Roman Körner (Head of Device and Technology Development)** is the Head of Device and Technology Development at TRUMPF Photonic Components and is responsible for the VCSEL R&D. Roman studied electrical engineering in Stuttgart where he completed his PhD on "The Germanium-Zener-Emitter for Silicon Photonics" and has a strong background on silicon state of the art processing technology.



**UnitySC** is a leader in advanced process control and delivers semiconductor metrology and inspection solutions that support the advancement of the semiconductor industry's heterogeneous integration roadmap. Specifically, our integrated systems target the semiconductor advanced packaging, power semiconductor and MEMS markets, focusing on applications, such as through silicon via (TSV) fabrication, fan-out wafer-level packaging, substrate control, hybrid bonding and chemical mechanical planarization (CMP) processes. We work in collaboration with our customers to develop and implement disruptive semiconductor metrology and inspection systems that provide industrialized solutions to process control problems, enabling them to better understand their processes, manage and improve their yields, and grow their businesses. Our customers include the largest foundries, integrated device manufacturers, outsourced semiconductor assembly and test service providers, and R&D centers. [www.unity-sc.com](http://www.unity-sc.com)



**Guillaume Vienne (Photonics Technology Leader)** joined Unity Semiconductor in September 2017, where he develops sensors and tools for metrology and inspection of semiconductors. Previously, he worked as scientist and manager for A\*STAR, Singapore. In parallel he was also adjunct associate professor at Nanyang Technological University. He was associate professor (2005-2009) within the nanophotonics group of Zhejiang University, China. He was previously with the Chinese University of Hong Kong (2004-2005), the Denmark Technical University (2003-2004), and the University of Burgundy (2000). He also worked in industry at Crystal Fiber A/S (now NKT Photonics) (2000-2003), and Hoya R&D Center, Tokyo (1998-1999). He was educated in France, Madagascar, Tunisia, Germany, and England, and obtained his PhD (1997) from the Optoelectronics Research Centre, University of Southampton, UK, under the supervision of Prof. Sir David N Payne. He is author or co-author of more than 70 papers, 10 patents, and about 50 talks and conference communications. He is a fellow of Optica since 2015.



**Mayeul Durand de Gevigney (Global Product Manager)** joined Unity SC ten years ago as a R&D engineer. He holds a MsC in Physics from Phelma (Grenoble INP) and a PhD from the University of Grenoble. He designed some novel inspection techniques for advanced semiconductor material inspection, covering applications from compound semiconductor to photonics. He is now taking care of the LightSEE product family as a Global Product Manager, which is a line that serves unpatterned wafer inspection for a variety of market segments.

Umicore NV is a Belgium based global materials technology and recycling group with about 11,050 employees, revenue (excluding metal) of € 4 billion and adjusted EBIT of € 971 million in 2021. Umicore generates the majority of its revenues and dedicates most of its R&D efforts to clean technologies, such as emission control catalysts, materials for rechargeable batteries and recycling. Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life. Umicore's business unit Electro-Optic Materials (EOM) is creating material solutions for optical and electronic applications to customers around the world. Among other products EOM offers large scale Ge wafers as well as Ge recycling services. [www.umicore.com](http://www.umicore.com)



**Ivan Zyulkov (Business Development Manager)** joined Umicore in 2020 as Business Development Manager at the Electro-Optic Materials business unit. Ivan's main focus is on photonics market exploring the role of Germanium in VCSELs, microLEDs and SWIR sensors. Before joining Umicore, Ivan had worked for microelectronic companies such as ASM International and IMEC resulting in more than 10 years of electronics experience. Ivan obtained his PhD degree in Chemistry from KU Leuven, Belgium, while he did his research at IMEC on selective atomic layer deposition for advanced CMOS metallization schemes.



UPVfab is the micro-fabrication R&D and pilot line facility at Universitat Politècnica de València. The facility comprises 500 m<sup>2</sup> cleanrooms ISO-7 (class 10.000) and positions to serve with automation tools for backend processing of semiconductor wafers. [www.fab.upv.es](http://www.fab.upv.es)



**vario-optics**, founded in 2009 as a spinoff of Varioprint AG, located in Heiden (Switzerland) is a leading supplier of Electro Optical Circuit Boards (EOCB). With this new technology, vario-optics ag has made significant investments, not only in the product technology but also in the development of the production process technology and the necessary infrastructure. The products are sold globally, to all major markets, such as telecom, industry, medical, automotive, military and aerospace. [www.vario-optics.ch](http://www.vario-optics.ch)



**Nikolaus Flöry (Business Development Manager)** is technical business development manager at vario-optics ag. He is responsible for consulting customers and project partners in developing miniaturized photonic applications & products using photonic integrated circuits. He holds a PhD in Photonics from ETH Zurich.



**X-FAB** is one of the world's leading specialty foundry groups for analog/mixed-signal semiconductor technologies with a clear focus on automotive, industrial, and medical applications. As a pure-play foundry, we provide manufacturing and strong design support services to our customers that design analog/mixed-signal integrated circuits (ICs) and other semiconductor devices (inc. MEMS, power semiconductors and photonics) for use in their own products or the products of their customers. [www.xfab.com](http://www.xfab.com)



**Joni Mellin (Product Marketing Manager Photonics)** is the Product Marketing Manager at X-fab since June 2022. Previously he served at ams OSRAM (2017-2021), Microsoft (2014), Nokia (2011-2014). He received his Master's degree at Semiconductor Manufacturing from Helsinki University of Technology in 1999 and MBA in 2019 from University of Minnesota.



**ZEISS** is an internationally leading technology enterprise operating in the fields of optics and optoelectronics. For its customers, ZEISS develops, produces and distributes highly innovative solutions for industrial metrology and quality assurance, microscopy solutions for the life sciences and materials research, and medical technology solutions for diagnostics and treatment in ophthalmology and microsurgery. The name ZEISS is also synonymous with the world's leading lithography optics, which are used by the chip industry to manufacture semiconductor components. There is global demand for trendsetting ZEISS brand products such as eyeglass lenses, camera lenses and binoculars. With over 35,000 employees, ZEISS is active globally in almost 50 countries with around 60 sales and service companies, 30 production sites and 27 development facilities. [www.zeiss.com](http://www.zeiss.com)



**Martin Völcker (Principal)** is responsible for innovation programs at Carl Zeiss SMT GmbH for 18 years. R&D employees from all business units are invited to investigate their ideas within SMT Research (for new technologies) or within Strategic Innovation Program (for new business). Several topics include PIC technologies, one of these projects led to the startup Scantinel offering PIC based Lidar systems. Before he was R&D manager for light microscopy. He studied physics in Munich and got his PhD at Max-Planck-Institute for Quantum Optics in Garching.

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