Aegiq (/ˈiːdʒɪk/, ee-jik) is accelerating global transition to quantum stage by bringing mass-market applications with most scalable technology. The company is using its pioneering single-photon and integrated quantum optics platform to address the demand for fibre and satellite quantum communications, and drive further research and applications in quantum computing, sensing and metrology. **www.aegiq.com**

Maksym Sich (CEO and Co-founder) started as a quantum physicist. He is a serial entrepreneur with a focus on deep tech and with experience across different sectors including aerospace and hi-end manufacturing. Max holds a PhD in Physics from the University of Sheffield and a B.Sc. in Economics and Finance from LSE.

AMS Technologies is a leading solution provider and distributor of high-tech, leading-edge components, systems and equipment, with almost 30 years of experience to date and currently serving more than 1000 European customers. Optical Technologies is our key competency field with the broadest and most widely varying product offering, ranging from optical components and systems for the most differing of applications, over cameras for machine vision and on to capital equipment for fiber optic applications. Coupled with our Thermal Management Engineering team focusing on Photonics cooling and temperature stabilization and our Power Technologies focus on Laser Drivers, TEC controllers and Power Supplies, we enable and create custom Photonics Solutions. **www.amstechnologies.com**

Jan Meise (CEO) joined AMS in 2010. He drives the company's sales expansion plans, organically and inorganically, which resulted in the company's acquisition of Sweden based Azpect Photonics in 2012 with the financial backing of AMS' shareholders. Prior to joining AMS Technologies, Jan lived and worked for 9 years in Silicon Valley, USA. In his last position at Finisar, he was responsible for new markets, driving business cases and reviewing potential acquisition targets. As part of a small technical entrepreneurial team, he also co-founded a boot strapped start up funded by Angel Investments. **Jan Meise is a former member of the EPIC Board of Directors.**

ATLANT 3D Nanosystems is a global pioneer startup company combining unique advanced technologies to enable atomic layer 3D printing. The company was founded in 2018 with a vision of delivering the first-ever atomic layer 3D printing technology to enable rapid prototyping and manufacturing of micro and nanodevices with simple and smart approach and outside of the cleanroom. Our team combines interdisciplinary expertise in advanced technologies, e.g. micro and nanofabrication, atomic layer deposition, and high precision system development, chemical engineering and material science to create the company's core technology, know-how, innovation, and strategy. We provide our customers services and support with equipment to enable their ideas to be realized. The company product development and R&D is funded by several EU Horizon2020 projects together with the Innovation Fund Denmark and Sony. **www.atlant3d.com**

Deep Detection: Better inspection for safer products. Photon counting x-ray cameras for industrial inspection. Deep Detection is a DeepTech company that wants to disrupt the 5B$ industrial & security inspection market with a new generation of photon counting multispectral X-ray cameras and deep learning analysis. We want to be a global reference for inspection and detection solutions through the design, industrialization and innovation of cutting edge photon counting technologies and spectral deep learning analysis. **www.deepdetection.tech**

David Ciudad (CEO) is leading Deep Detection since 2020, a new disrupt venture, a photonics company. Deep Detection wants to transform industrial inspection, with a disruptive and patented technology and AI spectral analysis. Executive technologist with 17 years of experience in leadership roles as CEO and Director of Operations. Ability to lead teams being or not under direct responsibility. Key strengths identified were confident, driven, action-oriented leader, creative and focused on results. David have founded or co-founded 6 companies, five of them technological. David is a Chemical Engineer from the URV (Spain) and has an International MBA from EAE (Spain).

Enlightra is a fast-growing deeptech startup developing next-generation photonic hardware for extreme-performance data communication and AI computing systems. The company brings the most advanced photonic technologies to the market through the combination of the unmatched expertise and dedication. Since its inception in 2021 Enlightra has raised >$2M in non-dilutive funding from US and EU agencies, grew a team of highly skilled photonic experts and already delivered its first product to the market. The company was featured as Optica's Ones to Watch 2022, and as one of the top 9 Swiss startups according to VCs. Enlightra is proudly supported by Y Combinator – World's famous tech startup accelerator, where it has become the first-ever European startup in Photonics. **www.enlightra.com**

Maxim Karpov (Co-Founder) received his MSc with honors in Applied Physics and Mathematics from the Moscow Institute of Physics and Technology in 2014 and his PhD in Physics in 2020 from Swiss Federal Institute of Technology in Lausanne (EPFL), where he spearheaded the development of the novel photonics technology of microcombs. Dr. Karpov's PhD Thesis has been widely recognized and received multiple awards including the MDPI Physics: Best PhD Thesis award 2021, the prestigious Hans-Eggenberger Thesis Prize 2020 and EPD-QEOD 2021 Thesis Prize for applied aspects from European Physical Society. In 2021, Maxim has been also recognized as one of the Rising Stars of Light 2021. Following his PhD work, he took the development of microcomb technology to the next level and together with his colleague co-founded in 2021 Enlightra – a deeptech startup commercializing the technology for a wide range of applications including optical data communications and processing. Maxim has been also selected as one of the participant in the first Deeptech Cohort of On-Deck Community and has gone through the World's famous startup accelerator – Y combinator in 2022.

Flawless Photonics is an innovator in photonics, targeting >10X improvements in optical fibers, lasers, and sensors, using proprietary techniques such as autonomous, in-space manufacturing. Our enabling technology, optimized for the unique requirements and rigors of space, allows the formation of heavy metal fluoride glasses and optical fibers, without generating light scattering defects that limit lasing power and transmission over long fiber lengths. This Flawless Fiber will have performance characteristics far superior to the best fibers made on Earth today and will have the potential to revolutionize the photonics industry. Sensors based on our terrestrial, novel fluorescence technology, will improve material detection in multiple application areas even before being boosted by Flawless Fiber. Other applications, requiring for instance power-efficient lasers and sensors in Mid-Wave InfraRed, will also benefit from Flawless Fiber. As our production capacity grows to thousands of Kms of fiber, long-haul classical and quantum communications using Flawless Fiber will become possible. **www.flawlessphotonics.com**

Hubert Moser (Director Engineering) started his space and photonics career by building rocket engines and analysing supersonic combustion with optical test setups. He has a Master degree (Dipl.-Ing.) in Aerospace Engineering from University of Stuttgart, Germany and a PhD in Engineering Sciences from University of Luxembourg. He successfully designed, built, and tested multiple satellite systems operating in Low Earth Orbit and Geostationary Orbit, experiments on the International Space Station, and managed the first privately funded mission to the Moon, the Manfred Moon Memorial Mission. Before joining Flawless Photonics early 2021 as Director Engineering, he was working for more than 15 years on different engineering and management positions at LuxSpace, Luxembourg's microsatellite integrator of the OHB group and the German Aerospace Center DLR.

CK Singla (Founder and CEO), during a professional career spanning 30 years as an executive, founder, advisor, and partner at organizations such as Flawless Photonics, Neuriot Labs, KPMG, Qwest Communications, Cap Gemini, Softline and Xansa, CK has guided corporate vision and strategy, built teams of up to 500 from the ground up, scaled revenues from 0 to $100M and guided product development. CK brings a unique perspective at the intersection of business and technology, having worked in multiple sectors, including Pharma, Telecommunications, SaaS and on-premise Software, Cloud data centers and Photonics. He is passionate about helping start-ups build differentiated products, cross the chasm and scale. He holds an MBA from the Wharton School of the University of Pennsylvania.

Hamamatsu Photonics, driven by Japanese excellence and market-leading optoelectronic technology, helps our customers visualize, measure, and analyze crucial information. Our mission is to establish photonics as a fundamental source of innovation for all customers. On the forefront of the development of new and existing applications, our advanced and highly sophisticated product range includes sources, detectors and imaging products designed to cover the entire optical spectrum. Present since 1953 across a vast array of industries, such as scientific research, medical, and industrial processes, we leverage added-value services and custom-made photonics solutions to meet our customer's ambitions without compromise. With headquarters in Hamamatsu, Japan, where our manufacturing and research facilities are located, we enjoy a global presence with business offices and associated companies throughout Asia, Europe and North America, and over 5,000 staff worldwide. **www.hamamatsu.com**

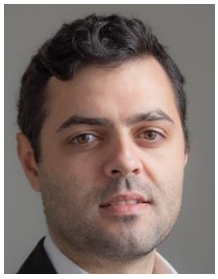
High-Tech Gründerfonds (HTGF), the seed investor, finances tech start-ups with growth potential and has supported over 680 start-ups since 2005. With the launch of its fourth fund, HTGF now has over 1.3 billion euros under management. HTGF's focus is on high-tech start-ups in the fields of digital tech, industrial tech, life sciences, chemistry and related business areas. To date, external investors have injected more than 4 billion euros of capital into the HTGF portfolio via more than 1,900 follow-on financing rounds. In addition, HTGF has already successfully sold shares in more than 160 companies. **www.htgf.de**

Gernot Berger (Senior Investment Manager) is a physicist who received his PhD in non-linear photonics from the University of Münster (Germany). He has a strong affinity for the strategic development of companies and was co-owner of a photonics start-up company where he contributed significantly to its success as sales, marketing and product manager. With his keen sense of market requirements and business development, he helped to establish the invention as a worldwide industry standard in optics manufacturing after the exit. Parallel to his work, he earned an Executive MBA from the Mannheim Business School in 2018, which focuses on entrepreneurship and strategic leadership. Before joining HTGF in 2019, Gernot used his strategic knowledge profitably for a medium-sized company selling high-tech B2B products in the highly competitive 3C industry with complex stakeholder structures.

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**

Torsten Wipiejewski (Business Development Manager) joined Huawei Technologies in 2014 and is responsible for the European business development of Huawei's Hardware Engineering Institute. He has also been appointed as Technical Advisor to president of Huawei's European Research Institute in 2017. Torsten's interest covers a wide range of technologies and materials for all the company's products from consumer electronics, smart phones and watches to routers and optical communication. Previously, Torsten was a partner at the venture capital firm VNT Management Oy and the CEO of Optogan a company based in Finland and Germany making blue LED chips. Prior to that he was the Chief Operations Officer at Firecomms Ltd. in Cork, Ireland where he was responsible for Firecomms' worldwide production and product development of low cost leadframe based fiber optic transceivers and visible vertical-cavity laser (VCSEL) products. Torsten was also Vice President of the Photonic Components group at ASTRI in Hong Kong and Director and Program Manager at Agility Communications in Santa Barbara, CA, USA and he held management positions at Infineon, Osram, and Siemens in Germany. Torsten received a "summa cum laude" Ph.D. degree in electrical engineering from the University of Ulm in 1994.

ICON Photonics has developed a wafer-level integrated packaging platform combining a Silicon interposer and a unique micro-optics technology, enabling the next generation optical connectivity for Datacom / Telecom and Quantum photonics applications. This platform is ideal to create advanced packaging solutions combining multiple functionalities such as fiber coupling / attaching solutions as well as high-speed electrical interconnects. The wafer integration capability enables the next level of miniaturization, providing all-in-one-package solutions and enabling the packaging cost scalability with high-volume manufacturing, delivered thanks to semiconductor-based microfabrication techniques. **www.icon-photonics.com**



Carlos Viana (CEO) is the inventor, founder and CEO of ICON Photonics SAS, a deeptech startup company developing and commercializing photonics integrated packaging solutions. Since 2017, he drives the strategy, vision and execution for the company to transform photonics science and technologies into products, enabling the next generation connectivity. He received his Ph.D. degree in electronics and photonics in 2014 from the Université Paris-Est, France.

illumiSonics is transforming histo-pathology by enabling intraoperative cancer diagnostics. Photo Acoustic Remote Sensing from illumiSonics is new physics and changes the fundamentals. A fully patented hardware and software solution – leveraging latest AI technologies. Today, when a surgeon removes cancerous tissue from a patient, it is sent to pathology where it takes 3-14 days to know whether all the cancer was removed. For example, in breast cancer surgeries – unfortunately – up to 32.5% of the time a clear margin is not achieved. And a patient must come back for a re-surgery. With PARS imaging from illumiSonics, a cancer surgeon will know for sure – intraoperatively based on an H&E histo-pathology image - whether they've removed all cancerous tissue. Without incremental time or cost. **www.illumisonics.com**

Jochen Schweizer (Chief Operating Officer) joined illumiSonics from Danaher, where he was Head of Microsurgery at the Business Unit Medical of Leica Microsystems. In this role, he was responsible for the Medical Strategy, the Portfolio Management and Clinical Applications. From 2012 to 2020 Jochen worked at ZEISS Microscopy in senior leadership positions in China and Germany, driving the development of products and solutions in Light Microscopy. Before, Jochen worked in the machine vision industry at the Fraunhofer Institute, Stemmer Imaging and SVS-Vistek. Jochen brings 10+ years of international leadership experience - managing complex multi-stakeholder projects. He is experienced in Product Management and Product Development in Medical, Life Sciences and Digital Imaging.

inPhocal is a deep tech startup from the Eindhoven region. Its mission is to rid the world of unnecessary pollution by introducing a unique optical technology that will allow for more efficient and new laser applications. Its patented optical technology will create a laser beam with a small spot and a focus range in which the laser beam can be used for applications such as marking, cutting, welding, wafer dicing and many more. **www.inphocal.com**

Robert van Tankeren (CEO and Co-founder) is co-founder and CEO of inPhocal. After finishing his studies in Physics and working for several years as a physicist, he worked at a consultancy firm as a director, focusing on high tech companies. His main responsibilities were related to sales, general management and HR/recruiting activities. After building up experience in these fields for over a decade, he decided to become an entrepreneur with a focus to use his gained knowledge to help rid the world of unnecessary waste and pollution. Together with his co-founders, they decided to make this the mission of inPhocal.

iThera Medical is a MedTech company based in Munich, founded in 2010 as a spin-off from Helmholtz Centre Munich. It develops, produces and markets a novel technology based on multispectral optoacoustic tomography (MSOT) for detection of tumors and chronic inflammatory diseases. In 2014, iThera won the German Innovation Award and in 2019 received a CE accreditation. With its unique ability to accurately visualize and quantify tissue molecules in-vivo and in real-time through several centimeters of tissue, the photonic molecular imaging technology is at the forefront of the next era in biomedical imaging. iThera has a very experienced world-wide team of 45 employees from 17 different countries and is preparing for strong growth, the current annual revenue is about 5 M€. The installed base already comprises of more than 120 systems at world-wide key opinion leaders. **www.ithera-medical.com**

Patrick Leisching (CTO) started working as CTO for iThera Medical in Munich in June 2022 and is listening to molecules to open a new era of in-vivo medical imaging. Beforehand, he was engaged for 12 years as SVP R&D for TOPTICA Photonics in Munich, scaling the R&D organization from 24 to more than 100 people and the revenue from 14M€ to 105M€. His industry career started in 1998 at Siemens Information and Communication Network in Munich, where had various functions from research to project management and head of optical systems R&D department, later at Nokia Siemens Networks he was engaged as head of portfolio management and finally head of product management for the operating systems software of optical and packet transmission systems. He holds academic degrees from Technical University of Munich (Dipl.-Phys., laser physics and semiconductor physics) and RWTH Aachen (Dr. rer. nat., III-V quantum well semiconductors and THz radiation), the post-doc as Feodor Lynen fellow was performed at Ecole Polytechnique in Paris (II-VI magneto-optic semiconductors).

InSpek is a start-up developing integrated photonic sensors for industrial applications. InSpek's first product is a chemical analysis system aimed at real-time monitoring of chemical and biological processes. This system is based on a patented technology for waveguide-enhanced Raman spectroscopy (or "Raman-on-a-chip"), which leverages the advantages of integrated photonics for Raman spectroscopy: higher sensitivity, lower cost, and smaller size. Overall, InSpek's vision is to enable Industry 4.0 with integrated photonic sensors. **www.inspek-solutions.com**

Jérôme Michon (CEO and Co-founder) is a co-founder and CEO of InSpek, which he created after his PhD and post-doc in integrated photonics. During his PhD, his research was on flexible integrated photonics and photonic sensors. He then worked on the technology at the core of InSpek during his post-doc at C2N/Université Paris-Saclay. Jérôme holds an engineering degree in Physics from Ecole Polytechnique and a PhD from MIT.

MIG Capital is a venture capital firm which invests in early-stage deep tech companies throughout Europe. The team is composed of experienced entrepreneurs and former scientists and engineers who seek a close collaboration with founders and management to create future technology and market leaders. Out of its offices in Munich, Germany, MIG has been instrumental in the successful development of numerous venture-backed companies, including BioNTech, Siltectra, and Hemovent. **www.mig.ag**

Oliver Kahl (Principal Investor) is a principal at MIG Capital, an early-stage, deep tech-focused venture capital investor based in Munich, Germany. Oliver has been active in the VC industry for several years including corporate venture capital at Osram and independent venture capital with eCapital. Prior to his career as an investor, Oliver held various positions in his family-owned business in the logistics sector, where among other things he oversaw the company's expansion to China. Currently, Oliver holds board mandates with various technology companies throughout Europe. He holds a PhD in physics from KIT and has spent several years in academia at research institutions in Germany, the UK, and the US.

M Ventures is the strategic, corporate venture capital arm of Merck. From its headquarters in the Netherlands and offices in Germany, USA and Israel, M Ventures invests globally in transformational ideas driven by innovative entrepreneurs. Taking an active role in its portfolio companies, M Ventures teams up with management teams and co-investors to translate scientific discoveries into commercial success. M Ventures focuses on identifying and financing novel solutions to some of the most difficult challenges, through company creation and equity investments in fields that will impact the vitality and sustainability of Merck's current and future businesses. Since inception, M Ventures has been instrumental in the creation and progress of over 80 global companies, helping advance multiple medicines and technologies to market launch. M Ventures invests, with dual strategic and financial foci, into visionary companies that find new ways to: treat the most challenging diseases, empower scientists with cutting-edge research and development tools, develop new solutions that change the way in which information is accessed, stored, processed, and displayed and address some of the most complex challenges in sustainability and technology convergence. The fund has the mandate to invest in four focus areas: Healthcare, Life Sciences, Electronics and Frontier Tech and Sustainability, in alignment with the strategic interests of Merck's business areas. **www.m-ventures.com**

Owen Lozman (Managing Director), FRSC CChem CSci is Managing Director at M-Ventures and heads investments in the technology fund. The M Ventures Technology fund invests across a broad range of topics with strategic relevance to The Electronics Business of Merck as well as covering cross sector topics relating to Digitalisation and Sustainability. Previously, Owen worked for the parent company, Merck, where he was head of New Platform R&D for the Electronics business and responsible for leading a world class global team of scientists including the Electronics R&D centre, based in Chilworth, Southampton, UK. During his career in Research and Development, Owen has driven many successful projects from concept to commercialisation - working closely with customers and partners to bring disruptive technologies to market as well as securing increased profitability for mature product lines. Owen has previously worked with FujiFilm, Avecia and the University of Leeds. He holds a PhD in Physical Organic Chemistry from the University of Leeds (UK) and has published more than 50 papers and 15 patents.

Morphotonics is the leading supplier of Roll-to-Plate Nanoimprint equipment, stamps and materials. Through its unique nanoimprint technology, micro- and nanostructures can be applied on very large areas (up to and beyond 1 m^2) in high volume at an unparalleled low cost. This opens up design freedom in ANY Optics in ANY displays in ANY volume by nanoimprinting. In particular innovative features and functions in displays like smartphones, tablets and augmented reality. The reusable flexible stamp ensures a cost-effective and versatile process that can be applied on various types of substrates. Within its competence centre, Morphotonics offers to scale-up any master and optimize customer high volume manufacturing. **www.morphotonics.com**

Onno Lint (CEO and Co-founder) is CEO and Co-founder of Morphotonics. Previously initiating companies in SME management consulting, high volume manufacturing of polyester technical performance yarns, development of 3D printing and bio-based materials. Corporate (consulting) experience with KPN, France Télécom, DSM, and Royal Philips. Areas of expertise include R&D valuation and early stage Business Assessment. Former academic (part-time) positions as (assistant/associate/adjunct) professor in Finance and/or Strategy domains at different Business Schools throughout Europe.

nlir
NLIR | Mid-Infrared Sensors

MEMBER of EPIC

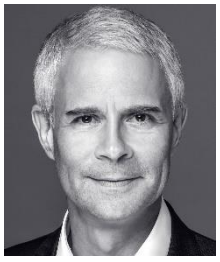
NLIR makes Ultrafast Mid-Infrared Spectrometers and Detectors. Our ultrafast Mid-Infrared Spectrometers that can acquire up to 130.000 spectra per second. Applications are In-Line measurements during production of products, materials, coatings, OCT, NDT and more. We also offer up to 25 GHz Mid-Infrared Detectors. Applications are chemical kinetics, IR communication, Combustion analysis and more. Further a version of our Mid-Infrared Single Wavelength Detector is super sensitive. It has a NEP of a few fW/√Hz. **www.nlir.com**

Peter Tottrup (CEO and Co-founder) has three decades of operational and investment experience in high tech industries. He is co-founder and CEO for NLIR. Prior to that, he has 10 years as Venture Capital Partner. Peter also spent 7 years as Consultant (DK & Schweiz), twice as CTO in VC backed start-ups (DK & USA) and 4 years at Accenture as Experienced Senior Consultant (DK, Sweden and USA).

NYNOMIC
THE PHOTONICS GROUP

MEMBER of EPIC

Nynomic AG is an internationally leading manufacturer of products for permanent, non-contact and non-destructive optical measurement technology. The products and services of the Nynomic Group are based on a wide range of intelligent sensors for measuring optical radiation and smart technologies for data acquisition, processing and evaluation. They can be scaled into different application areas and represent high efficiency increase and high customer benefit due to their good adaptability to customer processes. Miniaturization, digitization, automation - Nynomic consistently uses the constant technological change as the basis for above-average growth in the medium term compared to the market. The Nynomic Group has a clear marketing concept as a full-service provider from component to solution. It is globally positioned with independent brands and subsidiaries and around 500 employees. **www.nynomic.com**



Maik Müller (CEO) has been Executive Director of Nynomic AG since May 2015 and is responsible for Technology, Operations and Research and Development in this holding company. Previously, in October 2010, he was appointed to the Executive Board of tec5 AG and has since then been fully responsible for the operational management of the tec5 Group worldwide.

phaseform

MEMBER of EPIC

Phaseform designs and manufactures refractive wavefront correction devices. Our core technology enables transmissive, ultra-miniaturized, adaptive optics elements called Deformable Phase Plates (DPP). They can perform high-order aberration corrections like deformable mirrors, but at the same time can be seamlessly inserted into any optical beam path like lenses. Our products allow us to compensate for complex aberrations (e.g., from 3D samples like in life-science microscopy) but also for spherical aberrations, negating imperfectly aligned optical setups or ill-prepared samples thereby increasing throughput of inspection workflows. DPPs can be applied in multiple fields: life-science microscopy, ophthalmology, optical testing and analysis, optical communication, AR/VR and material processing. Phaseform is a spin-off from the Department of Microsystems Engineering (IMTEK) of the University of Freiburg in Germany. We are committed to finally making AO a standard and cost-effective way to restore the best possible quality of any optical system affected by optical aberrations. **www.phaseform.com**

Stefan Weber (CEO) has a long-standing technical background in Photonics and Adaptive Optics. He was on the management board of two successful high-tech start-ups: SwissLitho AG, manufacturing rapid prototyping nanolithography tools and modum.io AG in Zurich, developing IoT trackers for Pharma supply chain. Before that, he was product manager at Jenoptik Optical Systems GmbH, did his Post-Doc at the EPFL developing MOEMS systems, and earned his PhD in experimental at the FU Berlin.

PHOTONFIRST
Integrated Photonics Sensing

MEMBER of EPIC

PhotonFirst has been unlocking the power of the photon to measure temperature, strain, pressure and shape since 2006. It is PhotonFirst's ambition to become the global innovation leader in integrated photonics sensing and OEM's partner of choice for advanced applications. **www.photonfirst.com**

Nick Singh (CTO) is a deep tech professional and brings over 25 years of technology development and commercialization experience in semiconductors, nanotechnology & photonics. Nick has previously held CTO, director and senior roles at Oxford Instruments and Scienta Scientific. Nick also spent 7 years as CTO of a clean tech start up which he scaled up to deliver innovative net zero solutions. Nick is a Fellow and Chartered Engineer of the UK's Institute of Engineering & Technology (IET). He has a PhD in Plasma Physics, Electrical and Electronics engineering degree from University Paul Sabatier Toulouse. Nick has authored and co-authored over 50 papers and is an inventor of 4 patents in semiconductors. At PhotonFirst, Nick is driving the development of next generation Integrated photonics sensing solutions for existing and emerging markets.

PHOTON IP

MEMBER of EPIC

PHOTON IP is developing cutting edge technologies for advanced photonics applications. The company is based in Eindhoven, the Netherlands. The VC funded firm was founded in 2020, recognizing the continuing need to improve and expedite the development of advanced photonic integrated circuits and to simplify manufacturing of advanced optical chips. **www.photonip.tech**

Rui Santos (CEO and Co-founder) has more than 15 years of experience in photonics. Since he started his PhD degree in Madrid, worked as a researcher at TU/e and held the position of Principal Scientist in a major III-V photonics foundry. Based on his own research in the field, Rui is currently focusing on developing technology demonstrators for PHOTON IP's cutting edge technologies.

Geert Appeldoorn (CMO and Co-founder) is an experienced business developer with a track record in driving cross-industry innovation projects, managing technology strategy in the telecoms industry and building a team as Director Commercial Development in a photonics scale-up.

QNA

MEMBER of EPIC

QNA Technology was established in December 2016. Its founders and leaders are Artur Podhorodecki, Associate Professor, Eng and Mateusz Bański, PhD, Eng. We specialise in synthesis, characterisation and functionalisation of semiconductor quantum dots – the nanostructures with the potential to revolutionise a number of market sectors, such as production of displays or photovoltaics. At the same time, thanks to the globally unique flow synthesis technology, we are able to meet the requirements of manufacturers by providing industrial quantities of nanostructures with top quality physical and chemical parameters. **www.qnatechnology.com**

PHOTONPATH

MEMBER of EPIC

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

Douglas Aguiar (CEO and Co-founder) is a deep-tech entrepreneur with a decade-long experience in research and development of complex, high-tech systems for optical telecommunications. Has a particular interest in the modeling of light propagation, on the design, fabrication, and operation of complex Photonic Integrated Circuits and is fascinated by how to combine these high-end products with an agile development process. Douglas worked on the largest optical network equipment manufacturer in LATAM, analyzing market requirements, developing, and testing products. He was the Optics Technical Lead of the R&D team that developed the first 100 Gbps Transponders deployed in Brazil. With his leadership, the team also developed innovative large-bandwidth optical amplifiers, wavelength routers, optical channel monitors, and submarine cable systems. In 2015, he moved to Europe and obtained a Ph.D. degree in Integrated Photonics at Politecnico di Milano. In 2019, co-founded PhotonPath, a deep-tech startup, a spin-off from Politecnico di Milano, that is working to transform optical telecommunication networks with Integrated Photonics

Federica Biancon (COO) is a Management engineer / MBA at Politecnico di Milano. Federica started her career in the innovation World at PoliHub - the Univesity startup accelerator of Politecnico di Milano, where she designed and managed access to funding services for university spinoffs. While working at PoliHub, she supported the first steps of PhotonPath into the business World. She moved to Berlin in 2020 to join Hyundai CRADLE -the Corporate VC unit of Hyundai Motor Group, as an Innovation Manager, where she extended her knowledge in the fields of Mobility, Energy, and Autotech. After this experience in the corporate world, she became a startup and scaleup advisor, and today she serves as Chief Operations Officer at PhotonPath, responsible for the company scale-up and fundraising activities.

QUANTUNE TECHNOLOGIES

MEMBER of EPIC

Quantune Technologies is a Berlin-based start-up focused on biomedical sensors based on mid-infrared lasers. Quantune Technologies develops Tunable QCL-based Micro Spectrometers for Industrial and Medical Applications. **www.quantune.com**

COMPANY DESCRIPTIONS & BIOS

Quantum Solutions offers a quantum dot technology for wide-range image sensors. Since 2017 Quantum Solutions has supplied quantum dot (QDot™) products and built partnerships with multiple image sensor companies/universities worldwide. Quantum Solutions' QDot™ products serve as active materials and platform technology in wide range image sensors: to extend the sensitivity of silicon CMOS sensors beyond visible light for middle-wave infrared (MWIR), short-wave infrared (SWIR) and X-ray cameras. **www.quantum-solutions.com**

Marat Lutfullin (CEO) is the CEO of Quantum Solutions. Marat holds an M.S. and a Ph.D. in Chemistry from Moscow State University. He also holds an M.S. in Project Management from the Higher School of Economics. He has experience in both startups and industrial companies in deep science fields. In 2016, he joined King Abdullah University of Science and Technology (KAUST) and helped to establish the startup company Quantum Solutions in 2017, based on KAUST's advanced research in quantum dots. In 2020, Marat relocated the company to the United Kingdom to expand the facilities and grow the business.

QustomDot brings unmatched colors to microLED technology through quantum dot (QD) color conversion. Currently, there is no commercially viable, performing full-colour microLED technology available: high production costs and inefficient red microLEDs hamper the true fulfilment of the microLED USP. QustomDot facilitates and accelerates the commercialization of our customers' technologies by creating an ink customized to their manufacturing processes and application in joint development projects. In later stages, this leads to pilot and in the end volume production of a QD ink. Our team combines QD synthesis, surface engineering and ink/photoresist formulation into patterned color conversion layers for microLED displays. Our patented technology is heavy metal free and can withstand high light intensities. **www.qustomdot.com**

Kim De Nolf (CEO and Co-founder) is CEO and co-founder of QustomDot. She has received the masters and PhD degree in chemistry from Ghent University in Belgium. In 2017, she started a three-year post-doctoral fellowship to investigate the valorization potential of the research conducted at the PCN group, lead by prof. Zeger Hens. This work has led to the incorporation of QustomDot in January 2020. QustomDot is an advanced materials spin-off company and its mission is to realize the full potential of quantum dots by providing customized solutions for next-generation applications. The QustomDot technology enables the use of RoHS-compliant quantum dots directly onto (micro)LED chips.

ROBUST AO

MEMBER of EPIC

Robust AO (Robust Adaptive Optics) develops and markets high-speed z-axes under the Zwobbel® brand. The Zwobbel®, as a ready-to-use solution for high-speed laser material processing, can solve a crucial problem: the very slow z-axis positioning speed in high-power laser processes. Using a novel optomechanical technology, the system is faster, more power stable and more compact than comparable products. The use of the Zwobbel® enables new processing methods in the field of laser cutting, laser welding and additive manufacturing as well as the development of new processing fields in microstructuring. As a spin-off of the Fraunhofer IOF in Jena, we are also opening further professional fields in laser and quantum communication based on our high-power Zwobbel® technology. **www.robustao.de**

Claudia Reinlein (CEO) is the founder of ROBUST AO and has about 20 years of experience in the development of adaptive optics. She was head of the Adaptive Optics Group at Fraunhofer IOF in Jena, where she took responsibility for strategic development and business development. Claudia is a graduate of TU Ilmenau, Faculty of Mechanical Engineering, and holds a PhD in Engineering. Her in-depth knowledge of adaptive optics motivated her to develop ready-to-use solutions for the laser processing industry.

SCANTINEL® PHOTONICS

Scan | Detect | Navigate

MEMBER of EPIC

Scantinel Photonics, founded in 2019 and based in Ulm, Germany, Scantinel Photonics GmbH is a leading FMCW sensing technology company devoted in the development of next-generation solid-state LiDAR sensing solutions to apply FMCW LiDAR distance and velocity measurement technology to automated mobility and industrial applications. Scantinel FMCW Photonic LiDAR Engine adopts a wavelength of 1550 nanometers (meeting high standards for human eye safety), is equipped with a solid-state Optical Enhanced Array (OEA™) scanning system and provides a detection range of more than 300 meters at a very competitive cost target. Scantinel is backed by ZEISS Ventures and Scania Growth Capital. **www.scantinel.com**

Davide Canavesi (Business Development Manager) is responsible for strategy and business development at Scantinel. He has over 10 years of experience in the semiconductor and mobility industry. Davide holds a Master's Degree in Electronic Engineering from Politecnico di Milano and an MBA from Munich Business School.

SENORICS

MEMBER of EPIC

SENORICS is a start-up originating from the University of Technology Dresden commercializing an optical sensor solution for near-infrared (NIR) spectroscopy based on organic electronics. This proprietary technology allows low-cost and miniaturized NIR-spectroscopy integrated circuits with high performance. This has been proven by ZEISS, who is a strategic investor in SENORICS. SENORICS can deliver unique solutions for a multitude of measurement and detection problems in industrial applications. On top, for the first time, NIR-spectroscopy can be applied in consumer products because price and size fit the corresponding requirements. Even smartphone compatible integrated circuits are possible to positively impact everybody's life with material sensing. **www.senorics.com**

Ronny Timmreck (CEO) received his diploma degree in physics from the University of Technology Dresden, Germany and his PhD for a work on organic solar cells in the group of Prof. Karl Leo renowned for the organic electronics start-ups Novaled and Heliatek. Ronny founded his first start-up at the age of 23 and developed this company to a leader in its branch. In 2016, he took the lead in the start-up project SENORICS. He has been CEO of SENORICS since the company's foundation in 2017 and in that position raised more than 10 M€ venture capital.

SOLNIL

MEMBER of EPIC

SOLNIL developed a proprietary low cost nano-manufacturing technology that makes possible the direct nanoimprinting of metal oxides through advanced sol-gel chemistry. Metal oxides (e.g., SiO_2 and TiO_2) offer enhanced optical, thermal and mechanical performances compared to polymers used in standard nanoimprinting. SOLNIL's technology is suitable for applications requiring miniaturized and engineered optical functions: multispectral imaging, 3D sensing, laser optics, augmented reality, metasurfaces, gas sensing. **www.solnil.com**

Badre Kerzabi (CEO) obtained a degree in optical engineering from the Institut d'Optique Graduate School (Palaiseau) in 2006 and a Master's degree in photonics from Nanyang Technological University (Singapore) in 2007. He started his career in optical design for applications in medical imaging, semiconductors and displays. He then specialized in nano-fabrication technologies, joining the start-up Sunpartner in 2012 to lead the work on optical engineering and related micro and nano-fabrication processes for the development of semi-transparent solar cells. He will later take up the position of innovation program manager. After the acquisition by Garmin in April 2019, he will continue to hold the latter position until his departure in June 2020 to create and lead SOLNIL

COMPANY DESCRIPTIONS & BIOS

SPIO Systems has a new optics manufacturing platform (SPIO) that brings down the high assembly costs and solves the lack of scalability in high volume manufacturing of optical devices. SPIO is Stacked Planar Integrated Optics, and the core technology is Nano Imprint Lithography [NIL] of micro-optics in polymer on glass wafers and stacking wafers together into a multi wafer stack, enabling parallel production and assembly of thousands of optical devices in one operation. SPIO is erasing 75% of the assembly work and due to parallel processing cutting cost on unit price. SPIO Systems is an OEM manufacturer that disrupt the way optics are produced to the future needs. **www.spiosystems.com**

Henrik Madsen (CEO) holds a master's degree in optics and mechanical engineering. He worked 10 years in Ibsen Photonics with R&D in diffractive optics and another 10 years in Kaleido Technology with product development and management in ultraprecision metal optics. Henrik established Millpond Optics as CTO and lately SPIO Systems with ambitions on building a new trendsetting micro-optics production platform **SPIO** running on the same wafer level revolution as the electronic chip ran on.

USHIO Europe has, since 1964, earned a worldwide reputation as a specialist in industrial light sources, from ultraviolet to infrared and everything in between. Our products can be found in locations as diverse as your future smartphone or the BepiColombo Science Mission to Mercury. Whether it's by entertaining a cinema audience, simplifying any medical procedure while being doctor's right hand or disinfecting ballast water for cleaner seas, we are proud to contributing towards making people happier and healthier. Working in a wide range of industries for more than fifty years has given us a unique combination of experience and technical expertise. Everything we make is developed in response to a client's individual requirements. Our flexible production process allows us to provide tailor-made solutions that cover everything from a light source to systems and software. **www.ushio.eu**

Ardan Fuessmann (Sales Director) joined USHIO Europe in the beginning of 2017. In his role as Sales Director Sold State Lighting - EMEA, he is responsible for the sales and business development of USHIO SSL products, laser diodes and LEDs, at the EMEA market. He studied communications engineering in Nuremberg, Valencia and Xi'an, followed by an MBA in Kaiserslautern, Germany. He joined USHIO with a wealth of knowledge, having accumulated sales experience focusing on technically complex products, spanning over 15 years.

COMPANY DESCRIPTIONS & BIOS

Hiroki Kodaka (President & CEO) joined USHIO Inc. in Japan in 2009. After joining USHIO, he was engaged in the development of new technologies and products as well as the establishment of new businesses. He was responsible for the R&D division of USHIO Inc. from April 2017 until March 2022 as an executive officer and became the president of USHIO Europe in April 2022. He studied electronics engineering and received Bachelor, Master and PhD degrees from the University of Tokyo in 1994, 1996 and 1999 respectively.

Thomas Haider (Senior Director Sales & Marketing) joined USHIO Germany in 1992 and holds a Bachelor Professional of Management for Industry (CCI). Within total over 25 years of experience in Sales and New Business Development inside lighting industry and radiation sources for industrial use of ultraviolet (UV) and infrared (IR) emitters, he was responsible for various areas within the Ushio group. Since April 2022 he's in charge for all Sales & Marketing activities within the Ushio Europe Group (EMEA area) and Member of the Board from Ushio Germany GmbH.

VIGO VENTURES

MEMBER of EPIC

VIGO Ventures - shedding light on the future by investing in photonics. VIGO Ventures is an early-stage (pre-round A) investor for photonic and deep tech companies that brings hands-on business approach and possible follow-on investment up to €10mln We have a global technology leader and an experienced private equity investment group backing us up.Our two strategic partners are VIGO Photonics and Warsaw Equity Group. VIGO Photonics (https://www.vigo.com.pl/en) - a world leader in high-tech solutions - the most advanced mid-infrared photonic detectors, modules dedicated to these detectors and semiconductor materials. Warsaw Equity Group (https://warsawequity.com/) - a privately held investment company with over 20 years track record of successfully supporting business ventures both by investing their own capital, as well as by providing ongoing operational and strategic support for active investment projects. **www.vigo.ventures**

MEMBER of EPIC

VitreaLab is a deep-tech photonics startup established in 2014 in Vienna. Our glass-based integrated optics solutions are used in prototypes of AR, VR and medical displays as well as telecommunication packages. The technological breakthrough is the generation of a dense array of laser beams emitted from a thin piece of glass (Quantum Light Chip). If used in AR or VR displays the brightness and energy efficiency grow by more than an order of magnitude. **www.vitrealab.com**

COMPANY DESCRIPTIONS & BIOS

Jonas Zeuner (CEO) has obtained his PhD in Physics at the Vienna Center for Quantum Science and Technology in July 2018 and is the main author of the idea, on which basis VitreaLab is founded. His expertise in the waveguides sector has been validated during the last four years where he worked with a number of world leading integrated-optics groups (Massachusetts Institute of Technology, Istituto di Fotonica e Nanotecnologie, Universität Rostock), enabling the development of VitreaLab´s idea.

Voima Ventures

Voima Ventures helps founders accelerate the growth of deep technology ventures to global markets. We shed light on the ideas and technology that require time and courage to build. The way we work is simple: we combine science-driven innovation together with the Nordic serial entrepreneurial experience and a global mindset. **www.voimaventures.com**

WiredSense

MEMBER of EPIC

WiredSense is a technology start-up specializing in highly sensitive and fast detection of infrared and terahertz radiation. Founded in 2018 on the DESY research campus in Hamburg, Germany and with roots at the Max-Planck-Institute for Structure and Dynamics of Matter, WiredSense builds detectors that help scientists and engineers worldwide characterize light with highest precision. Our pyroelectric sensors are significantly faster than the industry standard while keeping maximum detectivity and a broad range of detection wavelengths. Based on these detectors we develop Sweeb, a cost-effective mid-infrared spectrometer for analysis of solids and liquids within seconds. Chemical material analysis is performed via our cloud-based platform, which combines a database of reference spectra with problem specific algorithms. Our mission is to simplify material analysis by making infrared spectroscopy more accessible. **www.wiredsense.com**

Matthias Budden (CEO) received his PhD in Physics from the University of Hamburg, where at the Max Planck Institute for Structure and Dynamics of Matter he investigated how high temperature superconductivity can be induced in molecular materials by infrared laser light. Before that, Matthias graduated at the University of Ilmenau with a focus on nanoelectronics and microfluidics and research stays in Berkeley (California) and Liverpool (UK). In 2018, he co-founded WiredSense at the DESY science campus in Hamburg to bring high-speed pyroelectric detectors for infrared and terahertz radiation from research to market. Based on this technology, together with a team of scientists and software developers, he aims to simplify chemical materials analysis by advancing mid-infrared spectroscopy.