
UK Government
UK Mission to Photonics West 2024
29 January – 1 February 2024
GREAT
BRITAIN & NORTHERN IRELAND

The UK is delighted to be at Photonics West 2024, showcasing the very best innovative photonics companies from across the country to buyers and investors around the world.

UK photonics has grown into a £15.2 billion industry, with like-for-like revenue growth at 7% and profit growth at 9% from 2020 to 2022. 79,100 people are now employed in photonics in the UK, and photonics is the 5th most productive UK manufacturing sector.

Eight UK regions produce over £1 billion worth of photonics goods and services, with strengths in South-West England, Scotland and Northern Ireland.

With increased demand across agriculture, health, communications, defence, satellites and manufacturing, UK photonics is forecast to **grow to over £17 billion industry this year and is on track to achieve its vision of becoming a £50 billion industry by 2035**.

Our universities have been global leaders in the field for nearly 150 years since Maxwell his Dynamical Theory of the Electromagnetical Field, and **today some 20% of global publications in the field originate in the UK**.

Visit the UK Pavilion at Booths 4923, 5017 and 5023 to learn about the strengths of the UK photonics industry and discover opportunities with leading companies. **Continue reading our Digital Directory to see British participants in Photonics West 2024**.

For more information about the UK photonics industry, visit the Photonics Leadership Group online:

www.photonicsuk.org/revolutionising-our-world/uk-photonics-output

About the Department for Business & Trade (DBT)

We are the UK's department for economic growth. We support businesses to invest, grow and export, creating jobs and opportunities across the country.

We are responsible for:

- Redrawing our rules to ensure businesses thrive, markets are competitive and consumers are protected.
- Securing investment from UK and international businesses.
- Advising, supporting, and promoting British businesses to grow and export.
- Opening up new markets for businesses by removing barriers and striking trade deals.
- Promoting free trade, economic security and resilient supply chains.

What we can do for you:

- Access our global network
- Expert market insight in doing business with the UK and around the world
- Find the right suppliers and partners to grow your business
- Promotion via trade shows, trade missions and sector specific showcases
- Represent the voice of UK and overseas businesses

For more information on investing in the UK:

Matthew Caron, US Technology Deputy Director
matthew.caron@businessandtrade.gov.uk

Phillip White, Technology Sector Specialist
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Rohin Burney-O'Dowd, Technology, Trade & Investment Manager
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Photonics West UK Delegation

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Aegiq

Sheffield, England, UK

www.aegiq.com

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Meet the Company

Aegiq is a quantum computing and networking company. We have developed a unique set of quantum integrated photonics microchips, which we use as a fundamental platform to build powerful yet compact and energy-efficient systems.

Our flagship product, Artemis quantum computer, has a very low size weight and power, and is suitable for applications in datacentres as well as on mobile vehicles. It is optimised for supercharging complex routing and task scheduling problems, and image recognition, at fraction of power. Additionally, we offer a portfolio of quantum-enhanced solutions for defence and cybersecurity.

Our customers and partners include the UK's Royal Navy, National Quantum Computing Centre, Honeywell and British Telecom.

Meet the Contact

Maksym Sich
CEO
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Aquark Technologies

Romsey, England, UK

www.aquarktechnologies.com

Booth #7301

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Meet the Company

Aquark Technologies is a company that focuses on enabling the mass market adoption of high-performance sensing and timing devices by improving the size, weight, power and cost of quantum devices that rely on cold matter. Utilising a new and simplified method for laser trapping and cooling atoms together with advances in passive ultra-high vacuum and microfabrication, the Aquark cold atom engines are built for robustness and usability at a high-performance scale.

Aquark Technologies span out of the University of Southampton in 2021 and is currently scaling its applied technology team beyond services to products in precision timing, education, gravity sensing and more.

Products offered are micro-spectroscopy cells, compact spectroscopy units, educational cold atom systems and high precision clocks for PNT and synchronization.

Meet the Contact

Dr. Andrei Dragomir
CEO
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Bay Photonics

Paignton, England, UK

www.bayphotonics.com

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Meet the Company

Bay Photonics are experts in the design of semiconductor-based photonic component packaging and manufacture of photonic components (e.g. emitters, detectors and photonic ICs). Bay take delicate, bare semiconductor die, connecting them electrically and optically to the outside world whilst ensuring the package is mechanically robust and under thermal control.

Bay supports all downstream semiconductor-based photonic processes. Downstream semiconductor processes refer to the steps that follow the fabrication of the photonic integrated circuits (PICs) on a silicon wafer (aka “wafer fab”). These processes are essential for completing the PICs and making them functional and include die-singulation, die-attachment, wire-bonding, encapsulation (the die are “encapsulated” in a package to provide mechanical protection, electrical insulation and connection, photonic connection and thermal control), final test, marking/labelling, as well as final assembly (PICs assembled into products, such as sensors, transmitters, receivers, etc.).

Bay Photonics has been supporting the UK semiconductor photonics R&D community since 2007 across diverse market sectors including telecommunications, biomedical, space and remote sensing. More recently, Bay has been involved with the UK Quantum Technology program. Bay Photonics have access to modern, fully-automatic workstations used by large volume commercial packaging houses enabling design for volume manufacture. As such Bay Photonics are a perfect partner for those at/or advancing from TRL3 (prove feasibility/technology development) through to TRL7 (system prototype demonstration in operational environment).

Meet the Contact

Andrew Robertson
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CamGraPhIC

Cambridge, England, UK

www.camgraphic-technology.com

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Meet the Company

Founded in 2018 as a spinout from the Cambridge Graphene Centre (CGC), the company has developed the first commercially scalable Graphene transceivers for use in advanced photonic communications.

Unlike Silicon and InP photonics, graphene delivers exceptional performance in terms of cost of data, bandwidth, latency and environmental stability. All critical drivers for the new generation of 5G/6G smart antennas and AI-HPC GPU to stacked memory communications links as well as ADAS sensor chipsets.

R&D and pilot production is based in Pisa, Italy and the UK head office is in Cambridge.

Meet the Contact

Marco Romagnoli
Founder and Director
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CORNERSTONE

Southampton, England, UK

www.cornerstone.sotonfab.co.uk

Booth #2735

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Meet the Company

CORNERSTONE is an open source, license free silicon photonics rapid prototyping foundry hosted at the Universities of Southampton & Glasgow.

We offer a plethora of different platforms to support a wide range of applications ranging from telecoms to sensing, LiDAR, quantum and more. Each platform possesses a standard component library to lower the barrier to entry for non-photonics experts.

We will gladly experiment and try new things for the benefit of our users. This flexible approach helps us to support early-stage R&D projects and successfully fabricate proof of concept prototypes.

Meet the Contact

Ramsey Selim
Business Development Manager
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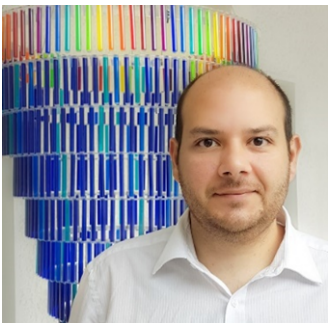

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Covesion

Southampton, England, UK

www.covesion.com

Booth #3463

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Meet the Company

Covesion are world leaders in the research, development and manufacture of MgO:PPLN crystals and waveguides for highly efficient, non-linear frequency conversion. With over 20 years' experience in the manufacture of PPLN technologies, experts at Covesion are well equipped to provide insight and guidance on the design of systems for generating visible and IR light.

We work closely with collaborating partners to provide highly technical and exacting PPLN solutions for the photonics industry. Our engineers have developed frequency conversion technologies for a diverse number of applications including countermeasure systems, communications (earth to satellite and ground based), LIDAR, and a range of other sensing devices.

Covesion PPLN solutions are an essential component in many emerging applications in the quantum science field. Our range of bulk crystals and waveguides are commonly used in quantum systems where narrow linewidth lasers are needed to access specific atomic transitions. Our proprietary PPLN chips can be used for atom cooling and trapping (including Rb, Sr, Be and Ca), as well as: entangled photon generation, upconversion sensing and detection, quantum key distribution and quantum computing applications.

Covesion provide off-the-shelf and custom solutions: from R&D requests to high volume OEM designs. Our team of PPLN engineers provide technical consultation and advice to assist in finding the right solution for each application. We also support our customers with a range of PPLN products including crystal mounting clips, ovens, temperature controllers, mounting accessories and fiber coupled solutions, providing a complete PPLN system for easy integration into optical arrangements.

Meet the Contact

Stuart Coomber
Head of OEM Sales
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Element Six

Didcot, England, UK

www.e6.com & www.e6cvd.com

Booth #560

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Meet the Company

Element Six (E6) designs, develops, and produces world-leading synthetic diamond and tungsten carbide solutions at global scale.

Since 1946, E6's focus has been on engineering and optimizing the diamond synthesis process to unlock innovative, diamond-enabled applications, including ultra-precision machining, drilling, thermal management, optics and photonics, wastewater management and quantum-enabled sensing. Element Six pioneered the development of single crystal diamond using the Chemical Vapor Deposition (CVD) method in the early 2000s.

With CVD production facilities in US and UK, the company has been at the forefront of a range of new developments in CVD diamond synthesis and associated industrial applications.

E6's patented technologies also drive what is believed to be the world's largest CVD manufacturing site, based in Oregon, US. Working closely with a network of global collaborators, E6's diamond solutions have accelerated the delivery of many breakthroughs in quantum research, including:

- In 2012, Harvard reported isotopically engineered CVD single crystal achieved spin coherence times of seconds at room temperature.
- Alongside TU Delft in 2015, E6's materials enabled the first successful loophole-free Bell's inequality test, proving for the first time that 'spooky action at a distance' is real. This also marked a significant technology step toward a quantum-secure enabled network.
- In 2018, Imperial College London utilized E6's engineered single crystal in the development of the world's first continuous-wave, room-temperature, solid-state MASER.
- Lockheed Martin's 2019 'Dark Ice' program delivered a DNV-enabled magnetometer that measured the direction and strength of nearly imperceptible magnetic field anomalies, opening up diamond-based quantum devices in GPS-denied navigation.

Meet the Contact

Dr Matthew Markham
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European Thermodynamics

European Thermodynamics Limited
Intelligent Thermal Management

Leicester, England, UK

www.europeanthermodynamics.com

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Meet the Company

European Thermodynamics Limited is a pioneering force in the realm of thermoelectric management, seamlessly integrating our expertise with cutting-edge photonics technologies. Founded by visionaries Kevin Simpson and Nick Porter, our company has emerged as an innovative leader committed to pushing boundaries and creating transformative solutions at the intersection of thermoelectric and photonics.

Our collaboration with photonics technologies extends to partnerships with industry leaders where we actively contribute to the production of single-mode laser diodes. This strategic alliance exemplifies our dedication to exploring and exploiting synergies between thermoelectric and photonics advancements.

As we carve our path in the photonics landscape, our commitment to excellence and innovation remains unwavering. We leverage photonics to enhance the performance and stability of thermoelectric devices, with a focus on applications in 5G Optical transceivers and LIDAR systems. This integration will drive technical advancements but also align with market demands for compact, cost-effective solutions, particularly in micro/nanodevices.

Our participation in the Mission to Photonics West 2024 underscores our commitment to staying at the forefront of photonics trends. It provides us with a platform to assess global opportunities, engage with potential customers, and gain insights from industry experts. We aim to contribute to and learn from the vibrant photonics community, further solidifying our position as a key player in the evolving landscape of photonics and thermoelectric integration.

Join us on this exciting journey where innovation converges with photonics, and together we illuminate the path to a future where technology transcends boundaries and transforms industries.

Meet the Contact

Kevin Simpson
Technical Director
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Forth Dimension Displays

Dalgety Bay, Scotland, UK

www.forthdd.com

Booth #5023

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Meet the Company

Forth Dimension Displays is a world leader in designing and manufacturing high-resolution Ferroelectric Liquid Crystal on Silicon (FLCoS). Devices used as Spatial Light Modulators (SLM) for premium near-to-eye microdisplays for military, medical and virtual reality imagers, as well as for structured light projection.

We provide a range of SLM solutions optimised for the best performance in demanding applications. As full service solution provider, we do not just sell products, we also offer our customers full access to Forth Dimension Displays' extensive technical expertise and experience.

Meet the Contact

Henning Molsen
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Fraunhofer UK

Glasgow, Scotland, UK

www.cap.fraunhofer.co.uk

Booth #5023

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Meet the Company

Fraunhofer UK is a not-for-profit research and technology organisation (RTO) offering industry professional development services in the field of photonics. We are a legally independent affiliate of the wider Fraunhofer network.

Areas of expertise include the development of proof-of-concept systems capable of deployment as well as laser source development. Markets include quantum, aerospace, energy, life science, agritech and security. We work either in funded projects or direct with industry.

Meet the Contact

Dr. David Armstrong
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Indium Corporation

Milton Keynes, England, UK

www.indium.com

Booth #5017

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Meet the Company

Indium Corporation is a premier materials refiner, smelter, manufacturer, and supplier to the global electronics, semiconductor, thin-film, and thermal management markets.

Products include solders and fluxes; brazes; thermal interface materials; sputtering targets; indium, gallium, germanium, and tin metals and inorganic compounds; and NanoFoil®.

Founded in 1934, the company has global technical support and factories located in China, Germany, India, Malaysia, Singapore, South Korea, the United Kingdom, and the U.S.

.

Meet the Contact

Jason Farrell
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Kelvin Nanotechnology

Glasgow, Scotland, UK

www.kntnano.com

Booth #5017

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Meet the Company

KNT (Kelvin Nanotechnology) has been in business for over 20 years. An internationally recognised provider of advanced photonics and quantum components, we have built up an extensive global blue-chip customer base all over the world.

We are a comprehensive photonic fabrication service provider for diverse market sectors and a qualified supply chain partner for multiple global product lines.

As one of the first suppliers of miniaturised quantum components in the market, we produce 3D ion traps, grating MOTs, MEMS gravimeters and specialist DFB lasers for international partners and customers. We are driving forward innovation in fabrication of quantum components to support quantum systems for information processing and computing, chip scale cold atom systems, sensors and high precision timing and navigation.

We provide early prototype and proof of concept support to research and industrial organisations. We're process driven and have a customer focused culture that successfully transforms ideas into reality.

Meet the Contact

Alka Swanson
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Lasermet

Bournemouth, England, UK

www.lasermet.com

Booth #4923

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Meet the Company

Lasermet is the international designer and manufacturer of laser safety equipment and systems.

Lasermet designs and manufactures Laser Safety Equipment and systems such as Laser Safety Interlock Control Systems, Active and Passive Laser Safety Cabins, Laser Blocking Screens, Curtains and Roller Blinds, Laser Shutters, and LED Warning Signs. The company also provides Laser Safe Industrial Doors and Filter Windows. Lasermet has been closely involved in developing the laser safety standard IEC 60825-1 and is UKAS accredited for Laser Product Testing and Certification. Training, Consultancy, Audits and FDA Report Services are also provided.

Meet the Contact

Steve Geldard
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Living Optics

Abingdon, England, UK

www.livingoptics.com

Booth #5545

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Meet the Company

Living Optics is breaking the barriers of hyperspectral imaging with a pioneering technology that captures data inaccessible to the human eye and conventional cameras to deliver information in an affordable and portable high-volume solution for diverse industrial and consumer applications. Hyperspectral systems provide many more data points for every pixel in an image, helping us uncover hidden properties in the light reflected off different objects.

Our distinctiveness stems from the fact that our hyperspectral camera, which is both cost-effective and user-friendly, can capture real-time spatial and spectral data at significantly higher resolutions and speeds than previously achieved. We have pushed the boundaries of technology by bringing together expertise in optics, sensors, tomography, data analytics, advanced mathematics, deep learning, and more. Through the harmonious optimisation of both hardware and software, our approach captures data that remains imperceptible to the naked eye, yet holds immense relevance for practical, real-world applications.

Meet the Contact

Roger Barker
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Luxinar

LUXINAR
INGENUITY AMPLIFIED

Kingston-Upon-Hull, England, UK

www.luxinar.com

Booth #5301

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Meet the Company

Luxinar is a leader in designing and manufacturing sealed CO_2 laser sources and ultrashort pulse laser sources up to 1000W for industrial applications. The company has been at the forefront of laser technology for over 25 years, and we have an installed base of over 25,000 lasers worldwide in industrial environments.

Our headquarters and manufacturing base is in the UK, and we have sales and service offices in Asia, Europe and North America. We sell and distribute our laser sources through our global sales organisation, service teams and distributors. Our lasers find applications across industries including automotive, electronics, packaging and textiles and for numerous applications such as cutting, drilling, marking and welding.

Meet the Contact

Jason Lee
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Nu Quantum

Cambridge, England, UK

www.nu-quantum.com

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Meet the Company

Nu Quantum is building the quantum networking infrastructure essential to scaling quantum computers. Quantum computers must go from hundreds to hundreds of thousands of qubits in order to achieve transformational impacts. Our approach is to interconnect many smaller cores using a Quantum Networking Unit (QNU) capable of efficiently scaling discrete Quantum Processing Units (QPU) to form a larger and more useful quantum computer. Nu Quantum is uniquely positioned to deliver a flexible platform that is adaptable to all qubit modalities, while delivering order-of-magnitude improvements in rate and fidelity over the current state-of-the-art.

We are creating full hardware solutions to create entangled qubit networks, including a unique high-efficiency qubit interface, photonic switching fabric, and control systems to build towards multi-core quantum supercomputers and quantum data centres. Partnering with leading quantum companies, governments and research groups, we are accelerating quantum out of the lab and into real world use.

Meet the Contact

Philip Dolan
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Oxford Instruments Plasma Technology

Bristol, England, UK

www.plasma.oxinst.com/

Booth #6222

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Meet the Company

Oxford Instruments Plasma Technology offers flexible, configurable production and R&D tools and leading-edge processes for the precise, controllable, and repeatable engineering of micro- and nanostructures including photonics devices. We have a 320-person strong workforce with global sales and service offices with our main site in Bristol, UK. Our systems provide process solutions for the etching of a variety of features and materials down to nanometre scale, nanolayer deposition and the controlled growth of nanostructures. These solutions are based on core technologies in plasma-enhanced etch and deposition, atomic layer deposition, atomic layer etch, ion-beam deposition and etch, and deep silicon etch.

Our technologies include the fabrication of devices for datacom applications such as edge emitting lasers and VCSELs. Including the etching of InP and GaAs III-V based systems and ALD and plasma-CVD deposition for anti-reflective coatings and passivation layers.

AR/VR is a key market, with ion-beam processing an ideal technology for the fabrication of optical gratings. More generally for the photonics market we are targeting processes which will reduce optical loss at interfaces, important for device improvement and miniaturisation across a range of sectors including microLEDS and quantum components.

Oxford Instruments Group Plc is a leading provider of high technology products and services to the world's leading industrial companies and scientific research. In addition to cutting-edge deposition and etch tools, our products include atomic force, electron and Raman microscopy suites, low temperature systems, and tool suites for nuclear magnetic resonance, modular optical spectroscopy and optical and x-ray imaging.

Meet the Contact

Dr. Katie Hore
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Phase Photonics

Morpeth, England, UK

www.phasephotonics.com

Booth #5017

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Meet the Company

Phase Photonics provides the highest quality spectrometers, illumination systems and support to its clients. Our OEM solutions are robust, reliable and easy to integrate. We will customise or can develop a completely new design for your application. Lab users will find our solutions easy to set up and install and you'll be collecting precise data in minutes.

By combining one of our spectrometers with an appropriate illumination system we can guide you towards an optimum solution. We pride ourselves in making sure our customers get the data they need with a well considered set up.

Meet the Contact

Andy Tomlinson
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Photon Design

Oxford, England, UK

www.photond.com

Booth #3353

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Meet the Company

Photon Design was started in 1992 and now provides a wide range of innovative photonics CAD tools to 35+ countries around the world, supplying most of the world's leading photonics companies, universities and government research labs. CAD products include tools for both passive and active (semiconductor) component and optical circuit modelling.

The company has a team of the brightest people in photonics modelling, ready to help you develop innovative solutions for tomorrow's photonics applications.

Meet the Contact

Dominic Gallagher
CEO
info@photond.com

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Photon Force

Dalgety Bay, Scotland, UK

www.photon-force.com

Booth #3216

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Meet the Company

Photon Force is the leading commercial developer of CMOS single-photon sensitive time-resolved SPAD array cameras and sensors, offering the world's highest throughput.

Our detector technologies are accelerating numerous industrial and research applications, in areas including remote sensing, LiDAR, quantum tech and DCS. We are also developing several next generation SPAD-based technologies and processing capabilities.

Meet the Contact

Richard Walker
CEO
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PowerPhotonic

PowerPhotonic
Enhancing Beam Performance

Dalgety Bay, England, UK

www.powerphotonic.com

Booth #5023

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Meet the Company

PowerPhotonic are industry leading experts in high precision low loss fused silica optics for beam/image optimization. We design, manufacture and validate beam shaping and image enhancing optics for the most demanding applications in:

- Industrial Laser Material Processing
- Medicine and life sciences
- Laser projection displays
- Defense and Science
- Telecoms

At the heart of all PowerPhotonic manufactured optics is a proprietary process for precision laser machining and polishing of fused silica, combined with a set of proven design and production validation techniques that enable the manufacture of freeform optical surfaces with a roughness of less than 1nm. PowerPhotonic uses this unique capability to deliver previously unattainable optical designs for optimizing laser beams – single or multi-mode, low or high power – and to enable novel applications in high resolution imaging. Arrays of micro-optic lenses, axicons and entirely freeform structures are just some of the proven elements we routinely manufacture and supply to our customers. Our LightForge™ micro-optics fabrication service allows optical designers to create their own completely bespoke optical surface and have the fabricated part shipped in as a little as 2 weeks.

Meet the Contact

Steve Kidd
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Purex International

Thorne, England, UK

www.purex.co.uk

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Meet the Company

Purex are an independently owned company that has been designing and manufacturing fume extraction products for nearly 40 years. Purex has 2 sites covering 40 000 square foot where we manufacture our full range of UK made products.

Fume extraction has a key role to play in the photonics industry, lasers used to mark, code or engrave on products can produce a wide range of dangerous by-products, that can be very harmful to health and the environment.

Purex units are designed to capture these dangerous fumes at source, filter out the dangerous particles and gases, purifying the air before releasing it back into the workplace.

This ensures any users around the equipment are kept safe, the product being marked is not contaminated and the laser equipment is kept clean.

Meet the Contact

Luke Fenton
Business Development Director
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Raptor Photonics

Larne, Northern Ireland, UK

www.raptorphotonics.com

Booth #2042

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Meet the Company

Raptor Photonics Limited is a global leader and manufacturer of high performance, industrial-grade and extremely rugged ultra-low light digital & analogue cameras. Raptor specialises in complete cameras and core engine solutions using CCD, CMOS, and SWIR sensor technology.

The extreme low light capability of Raptor's cameras makes them ideal for day/night surveillance, homeland security, space, industrial and scientific markets.

Raptor Photonics Ltd is a registered ISO 9001:2015 company and is headquartered in Larne, Northern Ireland.

Meet the Contact

Mark Donaghy
VP Sales & Marketing
md@raptorphotonics.com

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RedWave Labs

Harwell, England, UK

www.redwavelabs.com

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Meet the Company

Redwave Labs is a leading designer and manufacturer of control electronics and instrumentation for photonics and quantum technologies.

Established in 2004, Redwave Labs is a privately owned entity combining expertise from the fields of high-end digital and analogue electronics.

Our expanding product portfolio includes, but it is not limited to low noise laser drivers and temperature controllers, single photon counters, timetaggers or direct digital synthesis.

Meet the Contact

Vojtech Olle
Business Development Manager
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Skylark Lasers

Skylark Lasers

Edinburgh, Scotland, UK

www.skylarklasers.com

Booth #4923

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Meet the Company

Come and meet the Skylark Lasers team at Booth 4923!

We're driven by the mission to miniaturise spectrally-pure laser systems needed to enable the world's most demanding and emerging applications – reducing cost, weight, and size while maximising power and performance.

Our team works with you to gain a deep understanding of your needs, helping connect the dots between lasers and application to tailor a solution to your requirements.

Skylark NX lasers deliver ultra-stable single frequency continuous wave performance from a compact diode-pumped solid-state (C-DPSS) platform.

Our integrated monolithic design enables the production of the highest output power on a small footprint — combining the superior optical properties of solid-state lasers with the small form-factor, high-efficiency operation of diode lasers.

Outstanding beam characteristics, high output stability, and extremely low noise make Skylark NX lasers perfect for high precision applications in Raman spectroscopy, holography, interferometry, photoluminescence, lithography, flow cytometry, semiconductor metrology, and quantum sensing.

• Start up repeatability < 3 GHz on our absolute wavelength specification
• Narrow-linewidth operation < 200 kHz
• Wavelength drift < 20 MHz over 24 hours
• Intensity drift < 2 % over a 15°C temperature change
• Reduced background noise and increased signal-to-noise ratio with side-band attenuation of > 70 dB

The Skylark Lasers core portfolio of single frequency C-DPSS lasers offers wavelengths at 320, 349, 532, 640, and 780 nm.

Meet the Contact

Dr. Ben Szutor
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Space Forge

Cardiff, Wales, UK

www.spaceforge.com

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Meet the Company

We are an in-space materials manufacturing company developing space-enabled quantum grade single crystal diamond engineered substrates and products into the photonics and quantum markets.

Applications include heatspreading for significantly improved SWaP in high power density applications, deep UV optics, optical windows and quantum detectors.

Meet the Contact

Dr. Alastair McGibbon
Head of Semiconductors
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Torr Scientific

TORR SCIENTIFIC LTD
Specialists in UHV, Optical and X-ray Components

Bexhill-on-Sea, England, UK

www.torrscientific.co.uk

Booth #2535

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Meet the Company

Torr Scientific brings together a unique range of expertise and equipment from the worlds of thin film vacuum coating, vacuum instrumentation and electron-optics.
The company manufactures X-ray and electron-optical components, UHV Viewports and processes anti-reflective coatings. Vacuum optics are custom designed for researchers carrying out research using lasers in vacuum.

Vacuum brazing allows us to join dissimilar materials together for the fabrication of X-ray anodes, these are then coated with a variety of target materials, CVD diamonds can also be brazed and coated on the anode to increase performance.
Manufacturing quantities vary from 1 off custom products to many 100s for OEM customers.

The company manufactures MCP detectors and CVD diamond vacuum windows for synchrotron beamline applications.

Custom glass quantum cells are made in our dedicated glass shop and vacuum chambers in our machine shop, the glass cells can be supplied with AR coatings.

Meet the Contact

Philip Marston
Business Development Manager
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VividQ

Cambridge, England, UK

www.vividq.com

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Meet the Company

VividQ is a world-leading pioneer of holographic technology. Their proprietary algorithmic solutions eliminate holographic compute barriers, enabling high-quality hologram generation using standard hardware, in real time. Their patented 3D pupil-replicating waveguide technology for AR represents a world-first feat formerly considered quasi-impossible, ushering in new immersive possibilities.

Their unique solution combines efficient holography, expanded visual experiences, and outstanding image fidelity. VividQ are VC-backed, and supported by their founding team's profound expertise in photonics and computer vision, with a track record of translating cutting-edge deep tech into practical, market-ready solutions. This potent blend positions VividQ at the forefront of shaping the future of display technologies, particularly, in the short term, AR and VR gaming solutions.

Meet the Contact

Samantha Creswick
Commercial Manager
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Wave Photonics

Cambridge, England, UK

www.wavephotonics.com

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Meet the Company

Wave Photonics applies computational design techniques to integrated photonic component design. This process allows us to rapidly generate and adapt components to different materials, processes, and wavelengths.

We enable photonic chip designers to reduce their development times and enable fabs to offer expansive pdks for a new process without long development times.

Meet the Contact

James Lee
CEO
james.lee@wavephotonics.com

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Wideblue

Glasgow, Scotland, UK

www.wide-blue.com

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Meet the Company

Wideblue is a full-service product design and development company based in Glasgow, UK. Our strong focus on the translation of novel technologies into commercially viable products has gained us international recognition. Our passion and creativity allow us to engineer complex, innovative solutions for many diverse applications.

The Wideblue team has worked together for almost twenty years designing a broad range of technology-based products. Our skills cover product design, mechanical, electronics and software design, physics, and optics, with a particular expertise in:

- Optics/Photonics system integration
- Quantum Technologies (QKD, cold atoms, PNT)
- Space technology applications
- Medical applications

Wideblue has successfully designed several first-of-a-kind products. Our clients are individuals, start-ups, technology research organisations, charities, and social enterprises as well as global multinationals. Our diverse skill set and strength in photonics provide our clients with a full end to end design and manufacturing service.

With our global network, we are able to transition our R&D projects to full-scale manufacture, building supply chains and obtaining regulatory approvals in global markets. Our parent group, Pivot International, supports Wideblue at all stages of the development cycle and beyond into seamless transfer to manufacturing in locations around the world, including low cost. Pivot also supports Wideblue with incremental engineering support when needed, using its 120 strong engineer group worldwide across all disciplines.

Meet the Contact

Dr. Euan McBrearty
Head of Commercial and Innovation
euan.mcbrearty@wide-blue.com

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Yelo

Carrickfergus, Northern Ireland, UK

www.yelo.co.uk

Booth #5017

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Meet the Company

Yelo is a leading test equipment manufacturer that designs builds and supports test engineering solutions for a range of industries including photonics, defence, and automotive. We also manufacture bespoke test solutions for OEMs, CEMs, and EMS. Our 25,000-square-foot manufacturing facility boasts one of the largest test houses in the UK. It is home to a team of 50 staff including electronic engineers, mechanical design engineers, software developers, and test/commissioning/support engineers.

Meet the Contact

Valerie Lyttle
Marketing Executive
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UK Government Bodies, Industry Groups and Consortiums

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Anchored In

London, England, UK

https://www.anchoredin.uk/

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Meet the Organisation

Anchored In is an innovation consultancy supporting companies, academics and entrepreneurs to explore markets and funding opportunities, bringing their ideas into commercial practice.

We work with funders, support agencies, and governmental bodies in maximising their innovation investments and achieving their strategic goals.

Meet the Contact

Sara Diegoli
Director of Quantum Programmes
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CSconnected

Cardiff, Wales, UK

www.csconnected.com

Booth #5017

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Meet the Organisation

CSconnected represents the world's first regionally integrated compound semiconductor manufacturing supply chain, supporting global markets from key partner organisations based in and around South Wales in the United Kingdom.

Compound semiconductors provide the fundamental enabling technologies for new and emerging photonic/sensing applications, high speed connectivity and power electronics. Partners within the CSconnected eco-system support global technology leaders in research, development and innovation expertise from design through to full high-volume foundry manufacturing services ranging from epiwafers to advanced packaging and include leading-edge wafer fabrication tools.

In short, CSconnected partners offer design, prototyping and manufacturing solutions for semiconductor devices that will be at the heart of a wide range of markets powering megatrends of the future.

Meet the Contact

Chris Meadows
Director
chrismeadows@csconnected.com

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EPIC Centre

Torbay, England, UK

https://epic-centre.co.uk/

Booth #502

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Meet the Organisation

By renting an office or lab within EPIC for just £1.2k a month (all inclusive) businesses get access to a cleanroom and >£3M worth of photonics packaging equipment. This includes die/wire bonding, fibre alignment, PIC packaging, vacuum reflow, microscopy and metrology (X-ray / CT).

Set up your UK HQ or your UK R&D lab within EPIC, the home of UK photonics.

Meet the Contact

Wayne Loschi
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Global Talent Network

UK

www.great.gov.uk/global-talent-network

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Meet the Organisation

The Global Talent Network is a global community of talented professionals with an interest in working in priority science and technology roles in the UK.

The GTN forges connections between top international talent and employers, supporting a community of professionals with an interest in working in priority science and technology roles at innovative companies in the UK.

If you are interested in moving to the UK and meet the above criteria, then the Global Talent Network team at the UK's Department for Business and Trade would love to hear from you.

Meet the Contact

Christopher Belk
Head of GTN Operations
Christopher.belk@businessandtrade.gov.uk

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Photonics Leadership Group

United Kingdom

www.photonicsuk.org

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Meet the Organisation

The Photonics Leadership Group is an advisory voluntary body which aims to:

1. Increase the UK's position from its current place as one of the top 5 photonics manufacturers and innovators globally.
2. Enhance a strong and competitive photonics supply chain from basic components to high value integrated systems for applications from healthcare to defence and advanced manufacturing.
3. Provide a clear voice for the UK photonics industry emphasising the value of photonics as an essential element in solutions to societal challenges and as a rapidly growing manufacturing industry driving significant economics growth.
4. Maximise new photonics innovation and its commercialisation, strengthening UK industry to enhance exports and attract inward investment improving the competitiveness and growth of the UK economy.
5. Foster continuous strategic dialogue between the photonics industry, government, academia and support agencies, in the UK and Europe, to create an efficient environment for innovation and translation into manufacturing.

Meet the Contact

John Lincoln
CEO
john.Lincoln@photonicsuk.org

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Smart NANO NI Consortium

Smart Nano NI
A Strength in Places Fund project

Belfast and Londonderry, Northern Ireland, UK

www.smartnanoni.com

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Meet the Organisation

Smart Nano NI is a Northern Ireland consortium developing advanced prototyping and smart manufacturing methods to deliver new technologies. The consortium shares specialised capabilities around nano manufacturing and world-leading knowledge in photonics.

The goal is to create a self-sustaining local eco-system through research and innovation with opportunities for new applications across multiple sectors including analytics, healthcare, diagnostics and data storage.

Consortium members each address different markets using the same base technology of photonics.

The ambitions for the Smart Nano NI project are:

- Advance the growth of a photonics cluster in Northern Ireland
- Establish an integrated photonics design centre to bring photonic concepts from design to prototyping, increasing capacity to bring innovative products to markets
- To inspire the next generation of Northern Ireland's researchers, engineers, inventors and entrepreneurs through bespoke business accelerator programmes
- To enable over 70 SMEs to investigate new technologies and explore potential commercial applications for their business
- For manufacturing companies, to increase knowledge in smart manufacturing with an aim of a 30% productivity growth with industry partners

The Consortium is led by data company Seagate Technology in collaboration with Analytics Engines, Causeway Sensors, Cirdan Imaging, Digital Catapult NI, North West Regional College, Queen's University Belfast, Ulster University and Yelo.

Meet the Contact

Orlaith Hurley
Deputy Director
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Science & Technology Facilities Council

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Science and Technology Facilities Council

Harwell, Daresbury & Edinburgh, UK

https://www.ukri.org/councils/stfc/

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Meet the Organisation

The Science and Technology Facilities Council is keeping the UK at the forefront of international science and tackling some of the most significant challenges facing society such as meeting our future energy needs, monitoring and understanding climate change, and global security.

STFC's mission is to deliver world-leading national and international research and innovation capabilities. Our major research and innovation campuses at Harwell, Daresbury and research facilities across the UK and overseas support fundamental research in astronomy, physics, computational science and space science.

Our campuses and facilities are used by industry to support innovation and product development, and we fund innovation projects for industry and academia both at our own facilities and externally.

The Council has a broad science portfolio and works with the academic and industrial communities to share its expertise in materials science, space and ground-based astronomy technologies, laser science, microelectronics, wafer scale manufacturing, particle and nuclear physics, alternative energy production, radio communications and radar.

STFC enables UK researchers to access leading international science facilities by funding membership of international bodies including European Laboratory for Particle Physics (CERN), the Institut Laue Langevin (ILL), European Synchrotron Radiation Facility (ESRF) and the European Southern Observatory (ESO). The Council also leads UK participation in many of these international collaborations.

STFC is one of seven publicly-funded research councils and is part of UK Research and Innovation (UKRI). It is an independent, non-departmental public body of the Department for Business, Energy and Industrial Strategy (BEIS).

Meet the Contact

Donald MacLeod
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Technology Scotland

Glasgow, Scotland, UK

www.photonicsscotland.com

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Meet the Organisation

Technology Scotland is the representative body for the Enabling Technology Sector in Scotland.

Through our three networks, Photonics Scotland, MaaS Scotland, and Product Design Scotland, we support a vibrant community of industrial and academic organisations who are developing technologies to deliver product advancements in markets from healthcare and communications to manufacturing and mobility.

Technology Scotland delivers clear business value to members, providing a catalyst for growth and supporting the community through networking, collaboration, lobbying and thought leadership.

Our primary network Photonics Scotland is a community for all photonics and photonics-enabled organisations in Scotland.

We are the focal point for the vibrant sector and a trusted partner to our members allowing us to represent their views to a number of key stakeholders. We also facilitate a cohesive sector, providing a range of events, working groups and networking opportunities that help to drive collaboration between industrial and academic partners, both locally and internationally.

Ultimately, our goals are simple: to raise the profile of the sector, help grow the thriving cluster, and drive innovation in photonics in Scotland.

Founded as the Scottish Optoelectronics Association in 1994, Photonics Scotland is one of the oldest national photonics organisations in the world and remains one of the largest technology communities in Scotland.

Meet the Contact

Alison McLeod
Director – Photonics Scotland
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UK National Quantum Technologies Programme

United Kingdom

https://uknqt.ukri.org/

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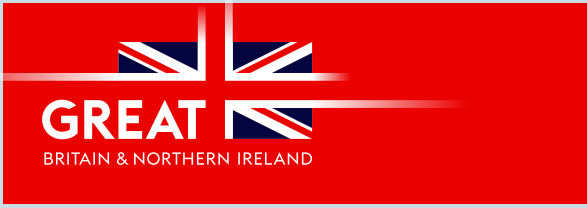
Meet the Organisation

The UK National Quantum Technologies Programme (NQTP) is a £1 billion dynamic collaboration between industry, academia and government. It represents and guides the fission of a leading-edge science into transformative new products and services.

The NQTP supports ideas, innovation and investment to secure UK advantage and opportunities in the globally competitive new quantum era. The NQTP acts as a cornerstone for the underpinning scientific research, skills training and international collaboration vital to building a resilient UK quantum-enabled economy.

Meet the Contact

Roger McKinlay
Challenge Director
Roger.mckinlay@iuk.ukri.org



Department for Business and Trade

We are the UK's department for economic growth. We support businesses to invest, grow and export, creating jobs and opportunities across the country.

We are responsible for:

- Redrawing our rules to ensure businesses thrive, markets are competitive and consumers are protected.
- Securing investment from UK and international businesses.
- Advising, supporting, and promoting British businesses to grow and export.
- Opening up new markets for businesses by removing barriers and striking trade deals.
- Promoting free trade, economic security and resilient supply chains.

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