*Thursday, 5 June 2025, 19:00 BST*

**AdvR joins Covesion in Strategic Expansion**

Hawthorn Photonics, a US-based photonics group focused on enabling the next generation of innovation in non-linear optics, is pleased to announce that AdvR Inc. is joining the group as part of a strategic expansion of its capabilities and global footprint. This move brings together AdvR’s people, products, and technological expertise in non-linear optical devices and quantum photonics with Covesion Ltd, another Hawthorn company specializing in precision MgO:PPLN technologies, creating a powerful, integrated platform for scientific and commercial photonics solutions.

Both Covesion and AdvR have decades of experience pioneering their respective technologies.

AdvR brings a rich foundation of technical innovation in non-linear optics, using advanced materials such as potassium titanyl phosphate (KTP), lithium niobate (LN), magnesium-doped lithium niobate, and thin film lithium niobate (TFLN). The company’s diverse product range includes high-efficiency frequency converters, phase modulators, and sources of entangled photon pairs, supporting advanced research and commercial deployment across quantum technologies, atomic physics, and other sensing applications.

Covesion has established itself as a world leader in magnesium-doped, periodically poled lithium niobate (MgO:PPLN) technology, offering cutting-edge products and exceptional technical support. Its solutions cater to a wide range of applications including lasers, scientific instrumentation, quantum technology, aerospace, and environmental sciences.

This is not simply a joining of companies; it is a purposeful alignment of vision, values, and technical depth. Together, these two companies will serve a broader base of scientific and commercial customers with expanded capabilities and solutions engineered for the future. The combination of AdvR and Covesion significantly expands group capabilities across a broad range of non-linear optical materials, including MgO:PPLN, LN, TFLN, and KTP. The combined product portfolio spans both free-space and fiber-based devices, offering high-performance phase modulators, entangled photon-pair sources, and customized frequency conversion solutions.

This enriched offering supports a growing number of advanced applications across quantum sensing, timing, and computing, as well as spectroscopy, secure communications, lasers, and biomedical imaging - delivering flexible, scalable solutions from 350 nm to 6000 nm. The combination will enable customers to access high-quality research and development, as well as standard off-the-shelf products and bespoke engineered systems. These merged capabilities allow for deeper customization and co-development with customers who require tailored photonics solutions.

AdvR’s established base in Bozeman, Montana significantly enhances the group’s presence in North America, enabling more responsive local support and closer proximity to key US customers. Covesion’s presence in the UK will enable the AdvR product range to gain greater access to European and Asian markets and will continue to drive technical excellence in MgO:PPLN crystal development, engineering support, and systems integration, creating a strong transatlantic platform for growth.

All parties are committed to a smooth and thorough integration process, ensuring continuity for customers, suppliers, and research partners alike. All existing customer relationships, service agreements, and product offerings will be honoured, with expanded support and development capacity going forward.

This milestone marks an exciting new chapter for the non-linear optical crystals market, one that builds on the foundations of both companies and signals a step forward in capability, capacity, and collaboration.

“This alignment is a natural and strategic evolution of our shared mission to drive innovation in non-linear optics,” said Mike Day, President of Hawthorn Photonics. “AdvR’s team and technology are world-class, and we’re thrilled to be working with them as we widen our reach into new application areas, accelerate innovation, and deliver even more value to our customers. AdvR joining Hawthorn Photonics brings new opportunities for growth through increased manufacturing capacity and commercial reach, while preserving the team’s core scientific focus and commitment to technological advancement.”

Commenting on becoming part of Hawthorn Photonics, Phil Battle, CEO of AdvR, said: “This marks an exciting new chapter for AdvR and our employees, allowing us to broaden our product portfolio and strengthen our operations. By bringing together world-class scientific and engineering expertise, we are expanding our technical capabilities to offer our customers cutting-edge innovations that will continue to meet their ever-evolving and complex requirements. Becoming part of this group positions us to play a key role in shaping the future of photonics.”

**ENDS**

**About Hawthorn Photonics**

Hawthorn Photonics is a US-headquartered photonics group dedicated to accelerating innovation in non-linear optics, quantum photonics, and advanced frequency conversion technologies. Through its portfolio companies, including AdvR Inc. and Covesion Ltd, Hawthorn delivers integrated solutions for scientific research, commercial systems, and next-generation optical technologies.

**About Covesion:**

Covesion Ltd is a UK manufacturer of Periodically Poled Lithium Niobate (PPLN) materials, including Magnesium Doped Periodically Poled Lithium Niobate (MgO:PPLN or PPMgO:LN) as well as undoped PPLN.

PPLN and MgO:PPLN are non-linear optical crystals for high efficiency wavelength conversion in the 460nm – 6000nm range. Covesion’s proprietary PPLN poling process creates high fidelity grating periods from 4.5μm to 33μm and is ideal for high volume manufacture.

Covesion provide off-the-shelf crystals as well as custom crystals: from R&D requests to high volume OEM designs. Their team of PPLN engineers provide technical consultation and advice to assist in finding the right solution for each application.

Covesion’s optical engineers have designed a range of PPLN crystal clips, ovens, temperature controllers and mounting accessories, providing a complete PPLN system for easy

integration into optical arrangement.

www.covesion.com

Images available:

• PPLN Crystal image

• Covesion logo

**About AdvR**

Founded in Bozeman, Montana, AdvR Inc. is a leading developer of advanced non-linear optical devices and integrated photonics solutions. With a strong focus on engineered materials such as lithium niobate, magnesium-doped lithium niobate, potassium titanyl phosphate, and periodically poled structures, AdvR has established itself at the forefront of waveguide frequency conversion technologies and phase modulators.

The company’s product suite includes high-efficiency frequency converters, phase modulators, and photon-pair sources — supporting cutting-edge applications in quantum information science, atomic and molecular sensing, environmental monitoring, and next-generation optical systems.

<https://advr-inc.com/>

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