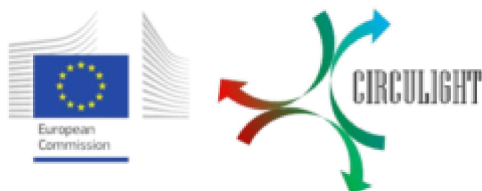


Editorial : this newsletter is published by the Circulight consortium on a biannual basis to inform you of the project's original scientific results and to popularize the underlying developed technology.

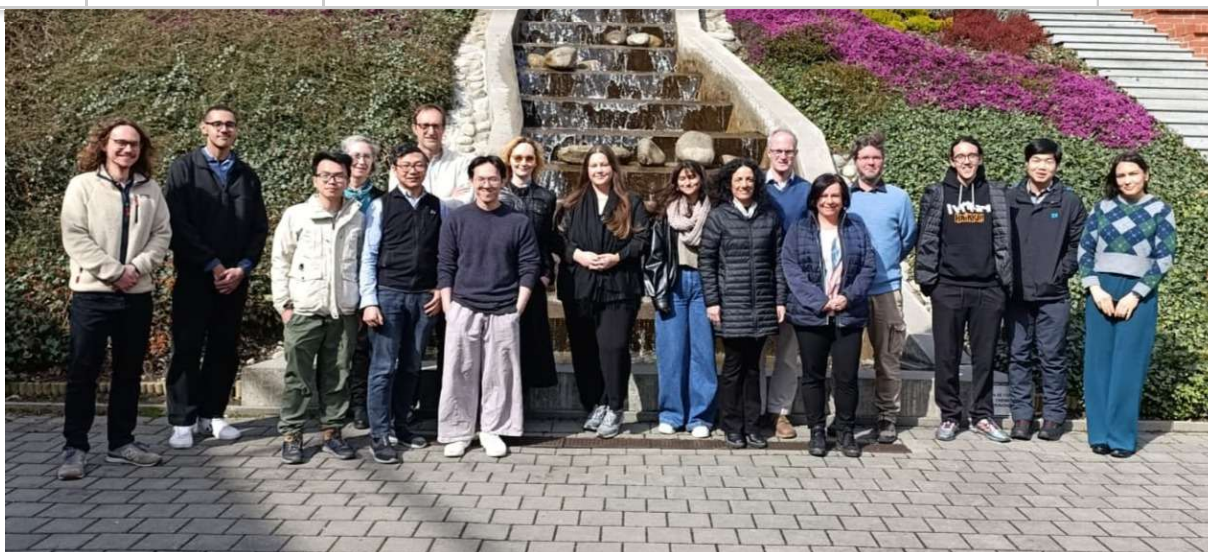


CIRCULATING LIGHT ON ANY PHOTONIC PLATFORM

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No101129645

Welcome to the latest edition of the **CIRCULIGHT Newsletter**, where we share the project's recent milestones, scientific achievements, and community activities. Over the past few months, the consortium has continued to strengthen its collaboration through productive meetings, international conferences, and more exchanges. In this issue, we look back at our consortium meeting in Ostrava and highlight CIRCULIGHT's successful organization of Symposium D at the 2026 E-MRS Spring Meeting in Strasbourg amongst other things.

News Update: CIRCULIGHT Consortium Meets in Ostrava



On **2–3 April 2026**, the CIRCULIGHT consortium gathered in **Ostrava, Czech Republic**, for its two-year consortium meeting, hosted by **VSB - Technical University of Ostrava**. Partners reviewed the project's progress, discussed ongoing research activities, coordinated the next stages of development, and explored opportunities for further collaboration. The meeting also included laboratory visits and technical discussions, reinforcing the strong cooperation between consortium members and ensuring continued momentum toward the project's objectives.

CIRCULIGHT's Symposium D at the 2026 E-MRS Spring Meeting

CIRCULIGHT proudly organized **Symposium D: *Hybrid Integration and Multiphysics Nanomaterials for Photonic Devices and Circuits*** during the **2026 E-MRS Spring Meeting** in Strasbourg. The symposium brought together **more than 60 researchers** from academia and research institutes across Europe and beyond to discuss the latest advances in photonic materials, integrated devices, and emerging technologies. The scientific programme featured **seven invited lectures, 32 oral presentations, and numerous poster contributions**, covering topics including hybrid integration, magneto-optics, nonlinear photonics, quantum photonics, and advanced photonic device architectures.

A particular highlight was the dedicated session on **Magneto-optical Materials and Devices**, which showcased recent developments in integrated optical isolators,

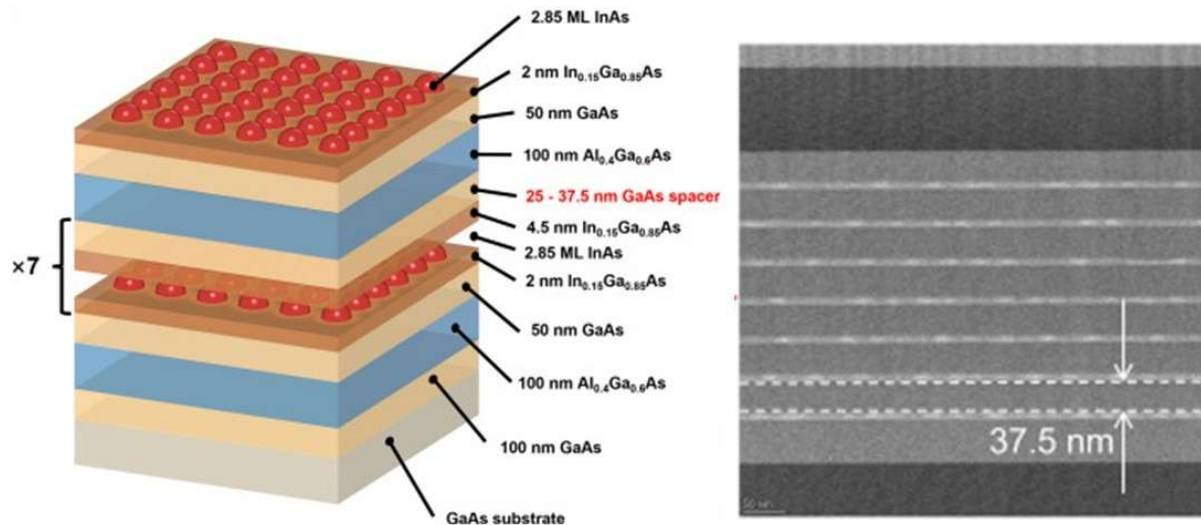
plasmonics, and quantum technologies are converging to enable increasingly versatile and efficient photonic circuits.

The event concluded with the presentation of the **Young Researcher Award to Hai Hoang Thi Thanh (Université Jean Monnet, Saint-Étienne)** for outstanding work on cobalt-ferrite nanoparticle composite materials for photonic technologies. The symposium successfully fostered interdisciplinary exchange, strengthened international collaborations, and highlighted CIRCULIGHT's commitment to advancing cutting-edge photonics research within the European scientific community.

Direct Epitaxial Growth of Quantum Dot Lasers for Silicon Photonics

Direct epitaxial growth of III–V semiconductor lasers on silicon is an important step toward addressing the lack of an efficient Si-based light source in silicon photonics. This approach offers the possibility of integrating lasers with CMOS electronics on the same chip, enabling more compact, scalable, and cost-effective photonic systems. Among the different gain materials grown on silicon, III–V quantum dots (QDs) are particularly promising. Their nanoscale three-dimensional carrier confinement makes them more tolerant to material defects, which is crucial because the lattice mismatch between silicon and III–V semiconductors can generate threading dislocations during epitaxial growth. This defect tolerance helps maintain strong laser performance on silicon. QD lasers also provide important benefits for low-power and stable operation. Because carriers occupy discrete excitonic states in quantum dots, these lasers can provide strong optical gain and achieve lasing at relatively low threshold currents, making them attractive for energy-efficient photonic transceivers. In addition, QD lasers show improved thermal stability, which is an important advantage for integrated photonic circuits where active components generate heat during operation. Beyond the laser itself, practical on-chip transceivers also require careful management of optical signal routing. In a densely integrated photonic circuit, unwanted optical crosstalk can couple light from the transmitter into the wrong receiver or back into the laser cavity, degrading system stability and signal quality. This is where on-chip circulators become highly relevant. A circulator provides directional routing of light between different ports, allowing the transmitted signal, received signal, and reflected light to be separated on chip. By combining QD lasers with on-chip circulators, it becomes possible to build a more compact and robust transceiver architecture in which the laser benefits from the intrinsic stability of QD

In our work, we focus on dots-in-a-well (DWELL) QD lasers, which combine quantum-dot gain with improved carrier capture, offering a promising route toward compact, low-power, and thermally robust light sources for integrated photonic transceivers. When integrated with on-chip circulators, these lasers could support more stable and scalable transceiver systems by enabling efficient light generation, directional signal routing, and suppression of unwanted optical crosstalk within a single photonic platform.



Schematic diagram of QD laser and TEM imaging of DWELL structure

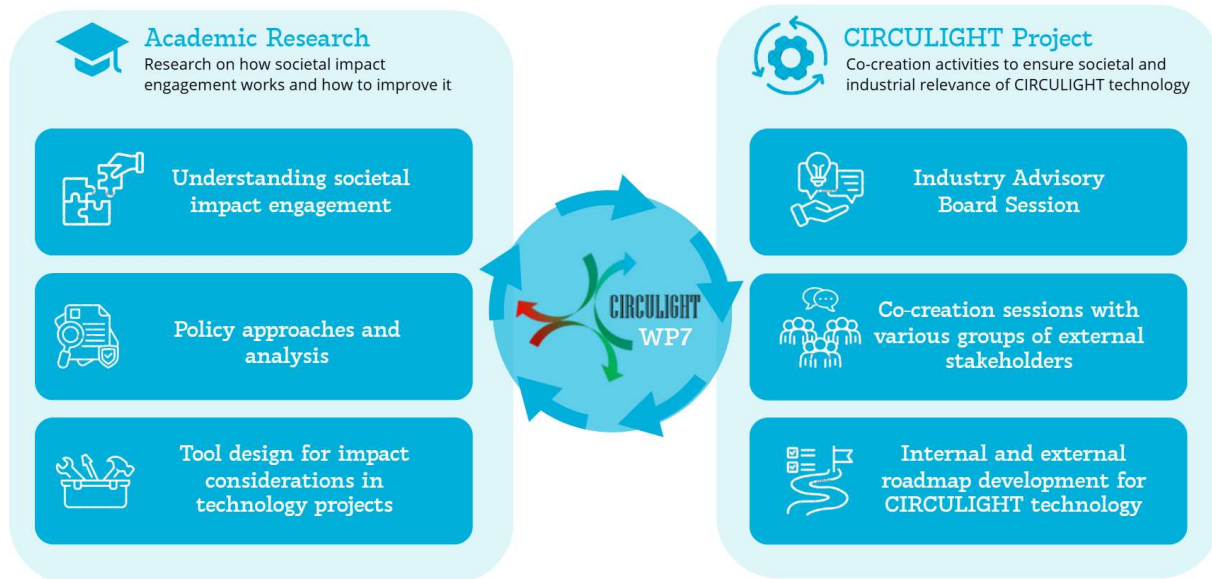
WP7 Spotlight: Integrating Societal Impact into Photonic Innovation

Technological innovation has a profound impact on society. While new technologies can help address major societal challenges, they may also have unintended consequences. This is why the EU's Horizon programmes promote **Responsible Research and Innovation (RRI)**, an approach that encourages researchers to anticipate potential impacts, engage stakeholders, reflect on research choices, and adapt innovation to better meet societal needs.

Within **CIRCULIGHT**, WP7 puts these principles into practice by supporting the technology work packages in developing innovations that are not only technically excellent but also socially relevant. We achieve this through two complementary approaches.

First, we investigate how societal impact can be more effectively integrated into technology-driven research. From a social sciences perspective, we examine why

structures influence collective engagement. Building on these insights, we will investigate policy approaches and develop a practical tool to help future technology projects systematically integrate societal considerations into their research.



Second, WP7 opens up CIRCULIGHT's innovation process to external perspectives. We have already organised two **Industry Advisory Board** meetings and are preparing a series of co-creation workshops with external stakeholders to ensure the project's technologies reflect both industrial and societal needs. The insights gathered will contribute to a roadmap linking future technology development with societal priorities while identifying the technological capabilities required to achieve them.

As the project progresses, WP7 will continue working alongside technical partners and external stakeholders to ensure that CIRCULIGHT's innovations are developed with both technological excellence and societal value at their core.

With our best wishes for the season!
Follow us and find out more down below :

LinkedIn

Subscribe

Past Issues

Translate ▼

[View email in browser](#)

[update your preferences](#) or [unsubscribe](#)

