

EU-funded BLOSSOM project launches to revolutionize photonic energy efficiency

Vigo, Spain, 18 March 2026 – The New European Project **BLOSSOM** (Self-Sustained Photonic Systems through Autonomous LOSS Harvesting) has officially kicked off in Vigo, Spain on 18th of March 2026, marking the start of a four-year journey to explore next-generation of photonic technologies with the potential to unlock strategic advances in resilient, energy-autonomous optical systems for future environmental, medical, industrial and security applications.

Funded by the **European Innovation Council** under the **EIC Pathfinder Open Call**, BLOSSOM aims to develop pioneering photonic concepts and technologies aimed at pushing the boundaries of autonomous photonic processors capable of intelligent, self-sustained operation opening the door to new applications in smart infrastructure, industrial autonomy and next-generation resilient systems.

The project is coordinated by Gradiant (Spain) and brings together a powerful multidisciplinary team of European researchers and industry partners from: Spain (Gradiant, Energhius, CiTIUS from USC), Ireland (F6S Innovation), Portugal (International Iberian Nanotechnology Laboratory) and Poland (Łukasiewicz Research Network Institute of Microelectronics and Photonics).

“By combining cutting-edge photonics research with a strong European consortium, BLOSSOM reinforces Europe’s position in strategic deep-tech fields and supports the EIC’s mission to turn high-risk research into future breakthrough technologies” said Marta Castro López, BLOSSOM Scientific Coordinator and Head of Micro-Nanoelectronics and Photonics at Gradiant.

About the BLOSSOM Project

BLOSSOM is an ambitious initiative focused on sustainable energy management in photonic integrated circuits (PICs). The project develops specialized electro-optical transducers to capture internal energy losses, storing and redistributing power via integrated Management Unit (PMU). By merging molecular physics with electronics, BLOSSOM is building self-activating, energy-autonomous systems that pave the way for ultra-massive integrated photonic modular networks and neuromorphic solutions, where the size of the networks can scale exponentially without a significant increase in energy requirements. This approach aims to revolutionize integrated photonics by drastically reducing energy consumption and enhancing sustainability.

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