

INTEGRATED PHOTONICS

Supervisor Name: Prof. Dr. Francisco J. Díaz Otero

Email: fjdiaz@com.uvigo.es

Research Group: Quantum, Communication, Photonic And Integration Lab

The Quantum, Communication, Photonic And Integration Lab (QOPHI Lab), one of the labs associated to the Group of Antennas, Radar and Optical Communications, specializes in quantum and classical photonics, focusing on photonic integrated circuits, QKD, and underwater optical communications. With advanced facilities and partnerships with industry leaders, the team bridges theoretical research with high-impact applications in sectors like aerospace and defense.

Keywords: Photonic Integrated Circuits (PICs) | Advanced Photonic Packing | III-V Semiconductor | Optical/Quantum Communications and Sensing

Research Focus:

Design and simulation of photonic components and photonic integrated circuits (PICs) for advanced optical, quantum, and sensing applications. Research activities include the modelling, optimization, and validation of passive and active photonic devices, as well as the development of complete integrated photonic systems. The work encompasses the full design cycle, from device conception and circuit simulation to layout generation and preparation for external fabrication through specialized photonic foundries. Fabricated devices are subsequently tested and experimentally validated using optical and electro-optical characterization techniques, enabling the assessment of their performance, functionality, and suitability for next-generation photonic technologies.