



PHOTONICS PUBLIC PRIVATE PARTNERSHIP

PHOTONICS²¹

EPoSS and Photonics21 publish white paper on Integrated Photonics

Integrated Photonics is one of the key enabling technologies of our time, with a wide range of applications in established and emerging markets dependent on it. These range from high-performance computing to industrial sensing to extended reality systems. The importance of integrated photonic solutions is recognised by The European Chips Act, which will accelerate investment in semiconductor chips, including in photonic integrated circuits (PICs).

Reflecting the timely importance of this technology for Europe, a ‘white paper’ on Integrated Photonics has been published jointly by the European Technology Platform Photonics21 and the European Association on Smart Systems Integration (EPoSS). This was in response to a 2022 request from the European Commission, seeking input ahead of the €43 billion Chips Act initiative.

The joint focus group featured a mixture of experts from both Photonics21 and EPoSS, maintaining a balance of representatives from research and industry, from different European member states, and from different technological backgrounds. Chaired by Michael J. Wale and Michael Scholles, the group worked together across five workshops in late 2022 to author the white paper.

The paper first considers the present needs of industry and society in Europe as its backdrop. It then reviews current trends in R&D&I of integrated photonics, considering various key future markets individually, followed by a SWOT of Europe’s current standing in the field. It concludes by identifying four key R&D&I priorities and offering programming recommendations based on these.

The white paper was presented to the European Commission during the Photonics Partnership Annual Meeting 2023 in Brussels on 26th and 27th of April and is now available for [download](#).