# Progress in InP-based Photonic Integration

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The application market for Photonic Integrated Circuits (PICs) is rapidly growing. Photonic Integration is the dominant technology in high bandwidth and long-distance tele-communications and is increasingly applied in shorter distances and within data centers. It is set to become dominant in many other fields of photonics. PICs offer compelling performance advances in terms of precision, bandwidth and energy efficiency. To enable uptake in new sectors, the availability of highly standardized (generic) photonic integration platform technologies is of key importance as this separates design from technology, reducing barriers for new entrants. Another major challenge is low-cost and energy-efficient integration of photonics with the electronic circuitry that is used for driving and controlling the photonic IC and processing its information. The major platform technologies today are Indium Phosphide (InP)-based monolithic integration and Silicon Photonics. InP-based technology offers integration of the full suite of photonic components, including lasers, optical amplifiers and high-performance modulators. In this paper we describe the current status and future developments of InP-based generic integration and we discuss the potential of InP-based Photonics for integration with electronics.