III-V-on-silicon photonic integrated circuits for communication and sensing applications

Gunther Roelkens, Photonics Research Group, Ghent University-imec

We will review our work on the heterogeneous integration of III-V opto-electronic components on silicon photonic integrated circuits by die-to-wafer bonding and transfer printing technology. This includes high speed onto-electronic components for communication applications as well as light sources and photodetectors operating at 'non-telecom' wavelengths for application in bio-sensors and spectroscopic sensing systems.