



Postdoc position on 2D-materials enhanced photonic ICs

UGent/imec - Photonics Research Group
Technologiepark-Zwijnaarde 15, B-9052 Ghent, Belgium
<http://photonics.intec.ugent.be/>

You will develop novel integrated optoelectronic devices based on the integration of 2D-materials such as graphene and metal dichalcogenides with high index contrast waveguides in Silicon or Silicon Nitride. This work is carried out in the context of the **Graphene Flagship project** (graphene-flagship.eu), a massive effort supported by the EU to bring graphene and other 2D-materials to practical use. The Ghent University Photonics Research Group, an associated lab of imec is partner of this project and responsible for the development of new devices for light modulation, switching and laser generation. The successful candidate will coordinate the groups' activities in the Flagship project and develop an own research line. The work will involve design, nanofabrication and characterization. You will work closely together with other imec groups and with partners in the Flagship project.

Experience:

- The candidate should have a PhD in the fields of photonics or physics
- Previous experience with 2D-materials research is preferred

Application:

Apply by filling in the [application form](#).

More information:

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About Photonics Research Group

The Photonics Research Group (about 85 people) is associated with IMEC, and is part of the Department of Information Technology of Ghent University. The group is headed by Prof. R. Baets and has been active in photonics device research for many years. The other professors in the group are P. Bienstman, W. Bogaerts, B. Kuyken, N. Le Thomas, G. Morthier, G. Roelkens and D. Van Thourhout. The main applications under study are silicon nanophotonics, heterogeneous integration, optical interconnect, WDM optical communication, silicon photonics biosensors and photonic integrated circuits for biomedical applications in the near-infrared and mid-infrared wavelength range. More in particular, the silicon nanophotonics work focuses on the design and fabrication of SOI-based photonic devices using

standard lithographic techniques compatible with CMOS-processing. The group is also strongly involved in the development of heterogeneous technologies, whereby the silicon photonics platform is combined with other materials such as III-V semiconductors for efficient sources, nanocrystals and polymers.

The Photonics Research Group has been coordinating the network of excellence ePIXnet and is involved in a number of EU-projects, including the FP7 projects ActPhast, PLAT4M, Cando, and Pocket and the H2020 projects TOPHIT, TeraBoard, PIX4Life, MIRPHAB and Phresco. Furthermore, the group is partner of the Center for Nano- and Biophotonics of Ghent University and the group has been awarded three ERC Independent Researcher Starting Grants and one ERC Advanced Investigator Grant.