

## Electrically controlled single photon source

A PhD position is available in the Photonics Research Group, imec's associated lab at Ghent University

As a PhD researcher, you will work within the framework of the MSCA ETN Phonsi. Phonsi is a large scale European Training Network sponsored by the Horizon 2020 Marie Skłodowska-Curie actions in which academic and industrial partners provide research training on nanomaterials and nanophotonics (<http://www.msca-phonsi.ugent.be>). This involves the formation of new nanomaterials, the in-depth characterization of their opto-electronic properties and the development of a new generation of nanomaterials-based nanophotonic devices that operate down to the single photon level. Your task in this project will be *the development of an electrically controlled single photon source for applications in quantum computing and communications*.

You will thereby rely on the vast experience of the Photonics Research Group in the conception, design, fabrication and characterization of novel integrated photonic devices. For realizing the source we will exploit novel concepts in high index contrast photonics, plasmonics and nano-structured materials. Your work will link to that of other PhD students working in the project, e.g. those developing novel nanocrystals to be used as the single photon emitter and those developing ultra-sensitive single photon detectors. You will strongly work together with the UGent "Physics and Chemistry of Nanostructures"-group led by prof. Z. Hens. The ETN Phonsi network will offer the opportunity for a long-term research stay in a partner laboratory and includes regular training activities organized by the network.

### Eligibility criteria

To be eligible, the candidate should not have performed any work or studies in Belgium for more than 12 months in a period of 3 years before the start of the project (which is January 1st 2015). You will be compensated according to the rules applicable for Marie Skłodowska-Curie actions.

Applications including a motivation letter and a CV should be sent before September 31<sup>st</sup> to:

Prof. Dries Van Thourhout

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