

Phd position in Optoelectronic single particle detection of decorated biomolecules for data storage

Tutor Roman Krahne

About the Project

In this highly interdisciplinary project that comprises biotechnologies, optical and electrical spectroscopy of nanoparticles, and nanofabrication, we aim to develop solid state platforms for detection of single particles on decorated molecules. Emphasis will be on the fabrication of nanopores, their implementation in larger chip architectures, and their application to detect the nanoparticle sequences on the decorated biomolecules. This PhD activity is part of the Horizon 2020 Future Emerging Technologies project "DNA-FAIRYLIGHTS" (<https://cordis.europa.eu/project/id/964995>), and the candidate will directly interact with our international partners, also in the frame of research visits abroad.

The PhD position is hosted by Optoelectronics group (<https://www.iit.it/it/web/optoelectronics>) that is embedded in a highly stimulating and collaborative environment at the headquarters of the Italian Institute of Technology (IIT) in Genoa, Italy.

Requirements: The ideal candidate should have a degree in materials science, biotechnology, physics, chemistry or engineering, with a vivid interest in cross disciplinary fabrication and innovative detection methods.

For further details concerning the research theme, please contact: roman.krahne@iit.it

For administrative issues Iulia.Manolache@iit.it