



# Integrated 3D polymeric nanophotonic devices

PhD/MSc research project

## The Challenge:

Polymeric materials are the most promising candidates for future nano-photonics devices and components with numerous applications ranging from displays (OLED) and solar cells to optical computing and sensing. Having excellent optical and mechanical properties on one hand, and suitability for unique, high-resolution and low cost fabrication processes, the development of polymeric components and devices is the cutting edge of current and future research in nano-photonics. To exploit these inherent advantages to their full capacity, it is necessary to envision, develop and demonstrate new fabrication schemes and denser integration levels, facilitating higher functionality and novel applications. In particular, it is desired to develop the infrastructure for 3D integrated optical devices, extending the limits of conventional (crystalline and semiconductor based) optics . The project is funded by the ministry of science in collaboration with Soreq-NRC, guarantying full financial support for suitable candidates.

## The Objective:

Take part in a truly multidisciplinary research combining material-science, nanotechnology, photonics devices and applications. To develop new approaches for 3D integration of nano-photonics components utilizing state of the art fabrication methods and facilities. Envision and realize novel devices and applications.

