

FRAUNHOFER HEINRICH HERTZ INSTITUTE

# PRESS RELEASE

PRESS RELEASE

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## PolyPhotonics project Berlin: Fraunhofer HHI and partners present optical chips made of polymer

**The growing core “PolyPhotonics Berlin” presents itself during the “Photonic Days Berlin Brandenburg”. “Great in Optics – Small in Size”, PolyPhotonics Berlin will take this motto to the global communications market. The project is part of the “Regional Enterprise Initiative” of the German Federal Ministry of Research. The consortium develops the value chain for the creation of a new technology platform.**

Eleven regional enterprises and three research institutes pool their expertise in PolyPhotonics Berlin. For the first time, the network partners will be able to implement comprehensive solutions using optical components made of plastic, which are globally not yet available in this form. The participants in this initiative want to create innovative materials and procedures for the production and assembly of photonic multiple-use components.

Christian Rickerts, Permanent Secretary in the Senate Department for Economy, Energy and Public Enterprises, comments, “The PolyPhotonicsBerlin technology platform shows that when it comes to digitalization, the capital city has an outstanding profile as a location also in the field of hardware development for optical communications technology. With a new generation of polymer chips, the PolyPhotonics partners will be forerunners on the global market for optical communications technology. By providing the Zukunftsfonds grant to fund the collaborative projects “Berlin Access” and “100x100 Optics”, the State of Berlin has made an important contribution to launching the new technology platform.”

The PolyPhotonics Technology provides a toolbox of hybrid-optical building blocks. Using suitable technologies, members of the initiative put these basic building blocks together to form flexible modules for integration into compact functional components of very flexible build (hybrid integration). At the core of the platform is a chip with optical waveguides, which are made of plastic. This chip may feature further passive elements such as optical fibers, thin film filters and micro-optics as well as active elements such as photodiodes or laser chips. In micro technological procedures, the latter components are connected to the waveguide chip. In the group's laboratories, the components are tested and become market-ready.