



ICFO research highlighted by OPTICS.org

Research by Dr. Joel Villatoro featured in the news

April 18, 2007

OPTICS.org, an organization specialized in the dissemination of lasers and photonics news produced worldwide, highlights a new fiber interferometer developed by ICFO postdoctoral researcher, Joel Villatoro in collaboration with Dr. Minkovich of the Centro de Investigaciones en Optica A. C. Based on fusion splicing of microstructured optical fibers (MOF), the simple interferometer is used to make a strain sensor only a few centimeters long.

Longitudinal strain on the MOF shifts the interference pattern to shorter wavelengths. Therefore, the interferometer has strong potential for strain-sensing applications. The fabrication is fast and simple, and interrogation with a simple LED and a palm-size

spectrometer are sufficient. The device is robust, operates from approximately 650 to 1600nm, and can withstand temperatures of 1000 °C or even higher. This work was recently published in Opt. Express¹⁵, 1491-1497 (2007).

Joel Villatoro is a postdoctoral research at the nanophotonic devices group, led by Prof. Goncal Badenes. The work was done in collaboration with the group led by Prof. Valerio Pruneri.



(left to right) Prof. Pruneri, Dr. Joel Villatoro and Prof. Goncal Badenes