

All-plastic fiber-based pressure sensor - DTU Orbit (08/11/2017)

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We present a feasibility study and a prototype of an all-plastic fiber-based pressure sensor. The sensor is based on long period gratings inscribed for the first time to the best of our knowledge by a CO₂ laser in polymethyl methacrylate (PMMA) microstructured fibers and coupled to a pod-like transducer that converts pressure to strain. The sensor prototype was characterized for pressures up to 150 mbars, and various parameters related to its construction were also characterized in order to enhance sensitivity. We consider this sensor in the context of future applications in endoscopic pressure sensors.

General information

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