

Abstract Submitted
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Metal embedded Fiber Brag Grating Sensors CHOODA KHANAL, FIU, GARMAN VARGAS, KANTESH BALANI, ANUP KESHRI, CARMEN BARBOSA, ARVIND AGARWAL, ROBERTO PANEPUCCI, FIU — A novel method of embedding optical fibers and optical fiber sensors, inside metallic structures will be discussed. We specifically report results for embedding fiber bragg grating sensors in an aluminum coating onto a steel plate. Characterization of an embedded FBG sensor and its effects on the sensor operation are also presented. Temperature sensitivity and the strain sensitivity will be discussed. The novel high throughput deposition method show the potential of embedding optical sensors onto metallic structures which make it suitable for many engineering applications in biomedical, civil, mechanical and aeronautical, among other fields.

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