Fibre Bragg grating encapted with no-core fibre sensors for SRI and temperature monitoring

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Abstract

In this work, a Fibre Bragg grating (FBG) encapted with no-core fibre (NCF) as surrounding refractive index (SRI) and temperature sensors are practically demonstrated. A FBG with 1550 nm wavelength was attached with 5 cm length of no-core fibre (NCF) is used as SRI and temperature sensing probe. The change of temperature and SRI induced the wavelength shift in FBG. The wavelength shift in FBG reacts directly proportional to the temperature with a sensitivity of while the sensitivity of NCF was measured as 13.13 pm degrees C-1.

Keywords

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