

The strain and temperature sensitivity coefficients of Fiber Bragg Grating sensors with different wavelengths are obtained. The fiber Bragg grating strain sensor is developed, and the calibration ...

Fiber Bragg grating (FBG) is a relatively novel method used for network health monitoring that has a number of advantages including high accuracy, multiplexing, electromagnetic interference ...

Non invasive FBG sensors installed on the Colleoni statue by A. Verrocchio in Venice, during the restoration of what is considered one of the most important equestrian monument of the Italian ...

A new unified strain transfer model is proposed to quantify measurement loss of fiber Bragg grating (FBG) sensors in CFRP. The effect of geometric factors of CFRP on strain transfer ...

Tilted fiber Bragg gratings (TFBGs), i.e., tilt of the grating plane breaking the cylindrical symmetry of the fiber, are inscribed in standard telecom single mode fiber without physical modification, which ...

Therefore FBG is essentially a sensor of temperature and strain but, by designing the proper interface, many other measurements can be made to impose perturbation on the grating resulting in a shift in ...

To address these issues, this study proposes a novel tilted fiber Bragg grating (TFBG)-based optical fiber humidity sensor, coated with a composite film of polyvinyl alcohol (PVA) and ...

Here we show that by continually monitoring the real-time strain and temperature evolution of commercial Ni-Zn batteries during cycling with fiber Bragg grating (FBG) sensors, critical insights ...

This example demonstrates a temperature sensor based on fiber Bragg gratings (FBG). The temperature-dependent change of the refractive indices of the fiber, consequently the shift of its ...

This study presents an automated paradigm for assembling high-density fiber Bragg sensor arrays on complex surfaces. The framework ensures signal fidelity and structural integrity, ...

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