

Here, we propose a high-temperature two-parameter fiber Bragg grating (FBG) sensor for monitoring temperature and vibration signals simultaneously. Two sets of cascaded gratings are written onto a ...

Static beam deformation prediction is performed using a Rayleigh - Ritz type analysis with three optimized trial functions and the strain information obtained from the fibre Bragg grating sensors.

The fiber Bragg grating vibration sensor has received a lot of attention due to its unique performance. However, the natural frequency of the sensor limits its development and application.

In this study, we propose a fiber optic positioning system that integrates an incoherent light source, grating arrays, and coding techniques, representing an advancement in the field of ...

This chapter provides an overview of optical fiber Bragg grating sensors to measure single and multi-axis strain, pressure, temperature, moisture, vibration, acoustics, and other environmental parameters.

This study introduces a novel deep neural network (DNN) framework tailored to breaking the sampling limit for high-frequency vibration recognition using fiber Bragg grating (FBG) sensors in ...

Vibration monitoring of rotating machinery is crucial for operational safety and optimized maintenance. In this work, we propose a fiber Bragg grating (FBG) vib.

With the development of fiber grating technology, the research on the vibration sensor of fiber grating is heating up at home and abroad, and the vibration sensors with different structures, different ...

In this paper, a fiber grating vibration sensor which is suitable for vibration monitoring in key areas is designed based on the technical background of vibration monitoring system.

This study introduces a novel deep neural network (DNN) framework tailored to breaking the sampling limit for high-frequency vibration recognition ...

Use fiber optic grating vibration sensors to monitor the vibration status of bridges. Within the frequency range, the sensor can ensure undistorted measurement, and the sensor has good ...

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