

# Quasi-distributed fiber Bragg grating sensor

The incorporation of a dedicated temperature-compensation grating effectively suppresses thermal drift, thereby enhancing the overall accuracy and reliability of the humidity measurement.

An apodized fiber Bragg grating (FBG) is introduced with a proposed apodization function for the effective quasi-distributed sensing estimation of the temperature and the strain.

The strong SI-FBGs with different grating pitches and the weak SI-FBGs with an identical grating pitch were employed to successfully measure the temperature distribution in a tube furnace and...

During the test, the sensors can measure the temperature stably. Hence, the proposed WDM FBG array is a promising quasi-distributed high-temperature sensor, that can be applied in many fields, for ...

Accurate measurement of bolt force condition is essential for safe operation of industrial infrastructures. We propose a novel bolt force sensor based on fiber Bragg grating (FBG) with ...

Fiber Bragg grating (FBG) array is a powerful technique for quasi-distributed sensing along the entire length of sensing fiber with fast response and high precision.

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, enabling ...

In this paper, two types of high-quality SI-FBGs, i.e., strong and weak SI-FBGs, were successfully inscribed in the standard single-mode fiber (SMF) using the femtosecond laser point-by-point ...

AtGrating is a professional company for optical fiber sensing. AtGrating offers industrial solutions by providing customized sensors and sensing instruments that add value, reduce uncertainty, and ...

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