

A demodulation algorithm is vital for a fiber Bragg grating (FBG) sensing system. In this paper, a novel demodulation algorithm based on the variable-step-size method and cross-correlation algorithm is ...

A three-points tracking-based high-speed fiber Bragg grating (FBG) demodulation method based on wavelength-tunable laser is proposed. The wavelength-tunable laser scans just three ...

Fiber Bragg gratings (FBGs) are widely used as sensors for temperature, strain, and vibration measurement. However, current FBG demodulation methods face issues with stability, size, ...

A high speed quasi-distributed demodulation method based on the microwave photonics and the chromatic dispersion effect is designed and implemented for weak fiber Bragg gratings (FBGs).

The proposed method offers the potential to enhance the capacity of FBG sensors within a network, paving the way for notable advancements in signal demodulation within intricate sensor ...

In this study, in vitro experimental tests were performed to investigate the behaviors and applications of gratings attached to intact and fractured thighbone for a range of compression loading...

Fiber Bragg grating (FBG) sensors have emerged as advanced tools for monitoring a wide range of physical parameters in various fields, including structural health, aerospace, biochemical, ...

Abstract: A high-performance, low-cost demodulation system is essential for fiber-optic sensor-based measurement applications. This paper presents a demodulation system for FBG sensors based on a ...

The aim of this article is to introduce an innovative algorithm for the calculation of the shift of the maximum reflectivity wavelength of a Fiber Bragg ...

In order to improve the demodulation speed of the fiber Bragg grating demodulation system, this article puts forward the principle of ultra-high-speed parallel acquisition and demodulation of fiber Bragg ...

Based on the influence of hysteresis and creep of piezoelectric ceramics, a tunable F-P filter is calibrated with a standard to locate the central wavelength reflected by fiber Bragg grating. In ...



Fiber Bragg Grating Acquisition and Demodulation

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