

In this paper, a photoelectric conditioning circuit for fiber Bragg grating demodulation is designed. The experimental results show that this method can accurately demodulate fiber Bragg ...

Qu, Hongfei; Lim, Kok-Sing; Nan, Pengyu; Xin, Guoguo; Yang, Hangzhou (2026) Design and Verification of an 850 nm Fiber Bragg Grating Demodulation System Based on a Czerny-Turner Spectrometer.

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 ...

This paper presents a new method of demodulating the spectrum of fiber Bragg grating (FBG) based sensors by employing deep convolutional neural networks (DCNN).

A chirped fiber Bragg grating is a grating where the period of the index modulation varies continuously along its length. This design is used for applications like compensating chromatic dispersion in fiber ...

In this paper, a novel demodulation method for vibration sensors based on ultra-weak fiber Bragg grating (FBG) using a self-referencing signal and DBN is proposed.

A novel approach to fibre Bragg grating spectra processing is proposed. The method is based on the use of nonlinear filtration and raising the spectrum value to the second power.

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 ...

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).

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 novel approach to fibre Bragg grating spectra processing is proposed. The method is based on the use of nonlinear filtration and raising the ...

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