Optics & Photonics

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# Design of Fiber Bragg Grating Demodulator

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To achieve synchronous demodulation of a large-capacity Fiber Bragg Grating (FBG) sensor network, a FBG demodulation system based on modulated grating Y-branch (MG-Y) tunable laser is designed, ...

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 ...

A FBG demodulation system based on FFP tunable filter is proposed and demonstrated that continuously scans all the grating on the fiber, so as to demodulate the wavelength signal.

But in practice, we should use the excellent characteristics of fiber Bragg grating to develop a new type of sensor demodulation system with high sensitivity, good stability, high energy efficiency and high ...

In this paper, a photoelectric conditioning circuit for fiber Bragg grating demodulation is designed.

Here, by applying the coupled-mode theory, influences of FBG design parameters such as grating length, refractive index modulation depth, and apodization type on the dual-grating ...

Simulation and experimental findings demonstrate that FMD can effectively eliminate the information of environmental noise and temperature, and greatly retain vibration information. In the ...

In this article, a tracking-based high-speed demodulation method for FBG sensing systems based on the wavelength-tunable laser is proposed. The wavelength-tunable laser only ...

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 ...

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 ...

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