Fiber Bragg grating frequency demodulation

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 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 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 ...

Here, we present a simple, compact, and robust technique featuring high linearity over a wide bandwidth and low background noise.

In this Letter, we propose a high speed quasi-distributed demodulation method based on the microwave photonics and the chromatic dispersion effect. The scheme uses broadband light source and ...

Our technique exploits the reflection characteristics of fiber Bragg gratings written in polarization-maintaining fibers to create a frequency discriminator, which is able to convert PM/FM signals into ...

The proposed method significantly improves demodulation frequency and can potentially be applied in high-speed measurements without requiring additional devices or increased costs.

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

A dispersion compensation fiber (DCF) changes the beat frequency within the FBG wavelength range. With a crossing microwave sweep, all wavelengths of cascade FBGs can be quickly decoded by ...

One of the most common and extensively employed optical devices is the Fiber Bragg Grating (FBG). Its reflection spectrum exhibits a peak at the so-called Bragg wavelength, where the fiber shows the ...

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 ...

Fiber Bragg grating frequency demodulation

Web: https://tlaletsoglobal.co.za