Optics & Photonics

GDR Telecom Site Energy Systems

Fiber Bragg Grating Fabry-Perot Signal Demodulator

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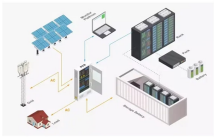
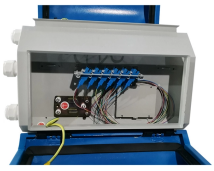
A novel demodulation method based on matched Fiber Bragg grating Fabry-Perot interferometer (FBG-FPI) for strain measurement is proposed and demonstrated, which combines ...



In this work, we developed a model to analyze spectral errors in cascaded FBG–FP sensors and validated it through both analytical and experimental approaches.



In this work, we developed a model to analyze spectral errors in cascaded FBG–FP sensors and validated it through both analytical and ...

A high-resolution sensing system is proposed and demonstrated. The sensor head is a Fabry-Perot interferometer formed by two cascaded uniform fiber Bragg gratin

Here we developed a cascaded Fabry-Perot cavity and fiber Bragg grating strain sensor fully integrated on sapphire fibers, permitting a sufficient temperature compensation and strain ...

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 ...

Overall, despite a lot of past effort, there is still a need for a simple and robust FM/PM demodulation scheme that can achieve linear, wideband, and background-free operation. Here, we present a novel ...

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 ...

In addition to uniform FBGs, the literature also features several types of grating-based fiber sensors.

We describe the design and performance of a prototype fiber Bragg grating demodulation system based on the use of a scanning fiber Fabry-Perot filter. The computer driven system is ...

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