

An optic-fiber sensor based on integration of extrinsic Fabry-Pérot interferometer (EFPI) and phase-shifted fiber Bragg grating (PS-FBG) is depicted and demonstrated.

This design can be a reference for achieving ultra-high polarization, ultra-wide bandwidth, and ultra-low loss performance, ultimately enabling its application in fiber lasers, fiber sensors, and ...

This review traces the evolution of research on Fano resonance in fiber-optic systems, revealing a clear trajectory from the first fundamental demonstrations in the mid-2000s to the ...

This paper reports on the past, present, and future scope of fiber-optic SPR sensors in the field of sensing of different chemical, physical, and biochemical parameters. A detailed ...

The Optical and Fiber Communications Reports (OFCR) book series provides high-quality monographs, edited volumes and textbooks in the multidisciplinary areas of optics, information science and electrical ...

We propose a novel resonance frequency mapping for a real-time quasi-distributed fiber optic sensor based on identical weak fiber Bragg gratings (FBG), which has stronger reflection signals and high ...

First, the integration of intelligent control mechanisms, such as thermo-optic, electro-optic, and opto-mechanical tuning, will likely enable adaptive Fano resonance devices capable of self-calibration ...

A fiber optic current sensor based on resonance frequency difference detection is proposed. A maximum relative error of 0.2% and current accuracy of 0.5 A is realized over a measurement range of 400 A.

In this paper, we report and describe a new type of interaction between SBS and Kerr effect for generating ultra-broadband OFCs with a span exceeding 10 THz and a repetition rate of 10 ...

In this paper, the analytical expression of the demodulation slope at the resonance point is for the first time deduced without any approximation, and the relationship between the slope value ...

The diffraction waves can couple with a surface plasmon, at resonance condition, i.e. when the propagation constant of the diffracted wave and that of the surface plasmon are equal.

This paper provides an overview of nonlinear optical effects in fiber-optic communication, focusing on key phenomena and their impact in ...

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