

Fiber Optic Pressure Sensor Fringe Interference

Due to its compact architecture, straightforward fabrication process, and high measurement precision, the proposed sensor holds strong potential for real-world applications ...

A high-sensitivity temperature and pressure sensor based on fiber Fabry-Perot interference is presented.

It is difficult for sapphire fiber Fabry-Perot (FP) sensors to generate high quality interference fringes because their highly multimode property. In this paper, we report a sapphire fiber FP strain sensing ...

This paper proposes and validates a fiber-optic pressure sensor based on a Fabry-Perot interferometer, which enhances sensitivity through the Vernier effect generated by concatenating ...

Based on the theory of multimode interference (MMI) and self-image formation, we developed a novel intrinsic optical fiber pressure sensor. The sensing element consists of a section ...

Interferometric sensors operate based on the principle of optical interference. When pressure is applied, it alters either the cavity length or the refractive index of the fiber. This leads to changes in the ...

We review our works on Fabry-Perot (F-P) interferometric fiber-optic sensors with various applications. We give a general model of F-P interferometric optical fiber sensors including diffraction ...

Exploring how interference fringe patterns in fiber-optic sensors transform structural monitoring, healthcare, and aerospace safety through advanced interferometry.

In this study, we propose a replicable technique for fabricating all-silica FTFPI high-pressure sensors, avoiding fringe envelopes in the reflection spectrum. This device is produced by...

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