

Preview

Here, we present a miniaturized curvature sensing system by integrating a GaN-based optoelectronic chip with the plastic optical fiber (POF). applications in seismic wave detection, geological resource exploration, and aerospace systems. Fabry-Perot (FP) optical sensors have gained widespread adoption in these domains due to their compact footprint and immunity to electromagnetic interference.

A small, highly sensitive, and electromagnetic interference (EMI)-immune refractive index (RI) sensor based on the Fabry-Perot (FP)

In the paper, the structure and parameters of miniature all-fiber common-path fiber-optic displacement sensor is studied, the experimental platform for high-precision displacement calibration

Abstract This paper presents the design and implementation of a miniature real time PCR system consisting of a disposable reactor chip, a miniature thermal cycler, and a multi-channel fiber optical

The sensor's FP cavity was fabricated by aligning two metal-deposited, single-mode optical fiber endfaces inside a microchannel on a silicon

MEMS chip-based single proof-mass triaxial fiber-optic accelerometer with ultra-low noise level

The combination of sensitive detection, stable performance, and fast response, along with the fiber-optic configuration and miniature probe size, makes our device a promising candidate for

This paper presents a miniature Fabry-Perot voltage sensor created at the tip of an optical fiber. The sensor utilizes a micro-machined, all-silica, opto-mechanical structure that is flexed

In this paper, we propose and demonstrate a miniature high-temperature fiber-optic sensor based on tip-packaged Fabry-Perot interferometer which is insensitive to changes in external

The validation of an on-chip FBG interrogator that works with sub-picometer wavelength accuracy in a broad wavelength range shows large

In the SEER project, process monitoring sensors are being developed that are based on very small silicon-based optical chips.

The detection of an electromagnetic pulse (EMP) field is of great significance in determining the field

environment of tested equipment in small

In this work, we propose and demonstrate a wide-band and highly-sensitive optical accelerometer based on dual cascaded spring resonators, which is microfabricated by Micro Electro

In the approach, a D-shaped POF sensor was fixed on an elastic belt to sense bending deformation, and an LED light source and optical receiver were customized with small packa-ging.

Here, we present a miniaturized curvature sensing system by integrating a GaN-based optoelectronic chip with the plastical optical fiber (POF). The light emitter and detector are fabricated

An ultra-short high-temperature fiber-optic sensor based on a silicon-microcap created by a single-mode fiber (SMF) and simple fusion splicing technology is proposed and experimentally

This article explores the feasibility of miniaturizing and packaging fiber Bragg grating (FBG)-based distributed optical fiber smart sensors (DOFSS) for future flight trials.

Web: <https://bssoda.pl>

