

Preview

This work proposes an optical fiber acoustic sensor using a Fabry-Perot interferometer (FPI), which consists of an optical fiber end face and a gold diaphragm with an effective diameter of 75 μm .

In this paper, a fiber optic Fabry-Perot interferometer (FPI) acoustic sensor is demonstrated based on a molybdenum disulfide (MoS_2) diaphragm with a

Acoustic sensing and monitoring are important techniques for structural health monitoring, marine exploration, biomedicine, etc. In contrast to conventional electrical acoustic sensors, fiber

Abstract This work proposes an optical fiber acoustic sensor using a Fabry-Perot interferometer (FPI), which consists of an optical fiber end face and a gold diaphragm with an

Targeting the audible frequency range, a fiber optic acoustic sensor with a 100-nm-thick graphene film covering the end surface of a ceramic ferrule (with a typical outer diameter of 1.25 mm) was

This study introduces a high-resolution optical fiber underwater acoustic sensor utilizing a Fabry-Perot (FP) interferometer design. The sensor consists

Standards for fiber optic sensors must encompass details related to the respective physical sensor functionality, sensor response for different measurands such as strain, temperature, or other

Based on the characteristics of the silica optical fiber, all-silica glass material was used to construct a FP interference optical-fiber acoustic wave

A Large-Area and Nanoscale Graphene Oxide Diaphragm-Based Extrinsic Fiber-Optic Fabry-Perot Acoustic Sensor Applied for Partial Discharge

A sensitive polymer diaphragm based fiber Fabry-Perot (F-P) sensor for aeroacoustic wave measurement is presented. A novel polymer material poly (phthalazinone ether sulfone ketone)

First, a graphene-silver composite diaphragm is used to enhance the optical sensitivity by increasing the reflectivity. Compared with a sensor with pure graphene diaphragm, graphene-silver composite can

A flywheel-like sensitive diaphragm, which breaks the sensitivity limitations imposed by the increased

thickness and the decreased radius in edge-clamped circular structure, has been

In the first half of this thesis, I present a highly sensitive fiber optic acoustic sensor that meets these requirements by utilizing a high-reflectivity photonic-crystal diaphragm 450 nm thick to convert the

Here, we present a novel, to the best of our knowledge, optical fiber acoustic sensor based on an ultra-thin diamond-like carbon (DLC) film, fabricated using the

The most sensitive fiber-optic acoustic sensors reported so far are based on FP cavities, and the recent works suggest that this can be further improved by using diaphragms of different materials with the

In this paper, an optical sensor based on the fiber-diaphragm composite structure is proposed for detecting low-frequency acoustic waves. The main structure of the proposed sensor is built up by an

This fiber-optic hydrophone based on the acoustic flow mechanism provides a novel strategy and solution for low-frequency, high-sensitivity underwater acoustic signal detection. Spider webs can

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