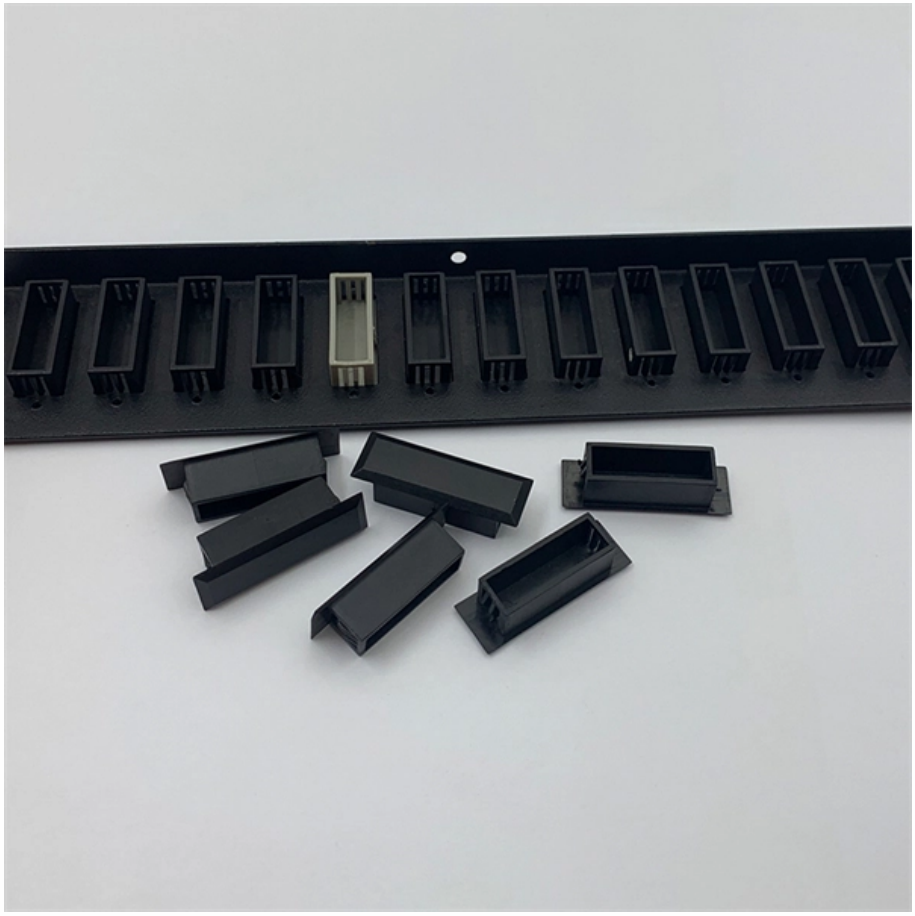
FRINDEL OPTICS

Ultra-fine high-sensitivity fiber optic sensor



Ultra-fine high-sensitivity fiber optic sensor

High-Sensitivity Temperature Sensor Based on Fiber

Optical fiber Fabry-Pérot (FP) interferometer sensors have long been the focus of researchers in sensing applications because of their simple light

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High sensitivity refractive index sensors with different no-core fiber

We investigate refractive index (RI) sensors using no-core fibers with diameters of 250 μm, 125 μm, and 62.5 μm. Experiments show that RI sensors with sizes of 62.5 μm and 250 μm are

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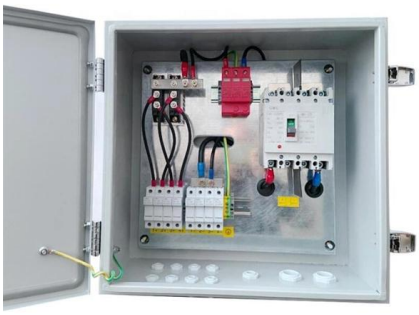

Ultrasensitive Fiber-Optic Sensor for AI-Enhanced Voice Recognition

Fiber-optic sensors offer distinct advantages for acoustic signal detection under extreme conditions due to their immunity to electromagnetic interference (EMI) and capability for remote

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High-sensitivity fiber temperature and pressure sensor based on fabry

Examples include coating the surface of tapered fibers with polydimethylsiloxane , applying UV glue on the surface of fine-core fibers , and plating gold film on Bragg fiber gratings

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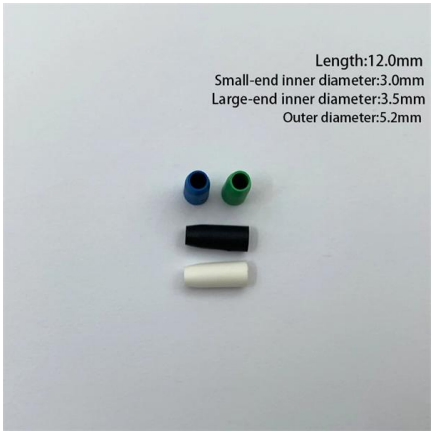

Ultra-high sensitivity acid pH optical fiber sensor based on core

A hydrogel-coated core-offset fiber pH sensor is proposed and demonstrated for sensing the acidic environments with a pH-range of 2 to 6. The fiber structure co

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Ultra-High Sensitivity and Temperature-Insensitive

In contrast, strain sensors based on fiber optic Fabry-Perot interferometers (FPIs) can obtain extremely low temperature cross-sensitivity, as

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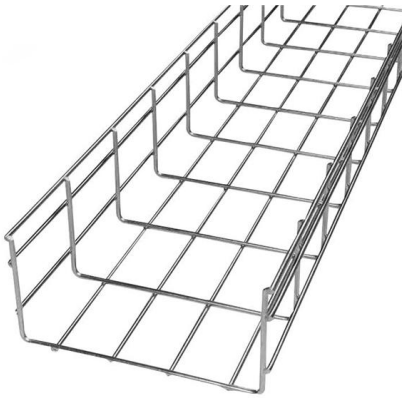

High sensitivity optical fiber magnetic field sensor based on semi

In this paper, a high-sensitivity extrinsic optical fiber F-P magnetic field sensor based on GMM was presented and prepared. The junction of the SMF and the quartz capillary tube is not

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High-Sensitivity Broad-Range Refractive

Index Sensor Using

A surface plasmon resonance photonic crystal fiber sensor featuring a photonic crystal fiber-enhanced design with three layers of periodically arranged air holes has been designed to

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Ultrasensitive Optical Fiber Sensors Working at Dispersion

In this review, recently developed ultrasensitive fiber sensors at the DTP, including fiber couplers, fiber gratings, and interferometers, are comprehensively analyzed. These three schemes

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Ultra-high sensitivity D-type photonic crystal fiber sensor deposited

Fiber optic sensing technology has extensive applications in many fields and demands high sensitivity and cost-effectiveness for sensors. In this study, we propose an ultra-high sensitivity

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High sensitivity fiber optic temperature sensor composed of two

A high-sensitive fiber-optic Fabry-Perot sensor with parallel polymer-air cavities based on Vernier effect for simultaneous measurement of pressure and temperature.

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Optical fiber strain sensor with high and tunable sensitivity

Therefore, new methods need to be developed further for economic high-sensitivity strain sensors. In this paper, an ultrasensitive fiber-optic strain sensor is demonstrated by constructing an FPI with a

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Ultra-sensitive fiber optic temperature sensor based upon a compact

This article proposes a novel ultra-sensitive fiber optic temperature sensor based on a compact cascaded Fabry-Perot interferometer (FPI) and Vernier effect (VE).

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High-sensitivity fiber-tip acoustic sensor with

Miniature acoustic sensors with high sensitivity are highly desired for applications in medical photoacoustic imaging, acoustic communications and

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Ultra-High Sensitivity and Temperature-Insensitive Optical Fiber Strain

The prepared device can be used as a promising strain sensor with desirable high sensitivity strain, a relatively large measurement range, and negligible temperature sensitivity.

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Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

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(PDF) Ultra-High Sensitivity and Temperature

We proposed and demonstrated an all-fiber in-line twist sensor which was based on a capillary fiber spliced between two single-mode fibers with a

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High-sensitivity refractive index sensor based on ultrafine conical no

This study designs and fabricates a high-sensitivity optical fiber refractive index sensor based on the TNCF structure, which is suitable for high-precision measurements of liquid refractive

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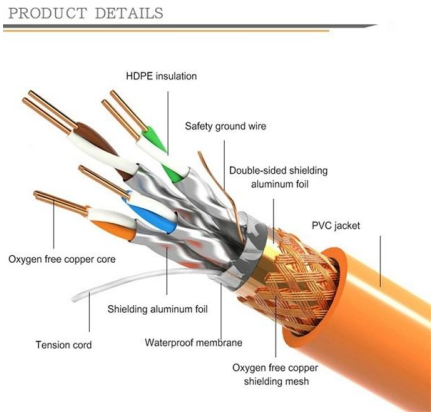

Highly sensitive fiber-optic temperature sensor based on Lyot filter

A highly sensitive fiber-optic temperature sensor based on a Lyot filter cascaded with a Fabry-Perot interferometer (FPI) is proposed and demonstrated in this study.

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A High-Sensitivity U-Shaped Optical Fiber SPR Sensor

This paper proposes a high-sensitivity U-shaped optical fiber sensor based on indium tin oxide (ITO) for surface plasmon resonance (SPR) sensing.

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Network Cabinet & Rack

Ultrasensitive Fiber-Optic Sensor for AI-Enhanced Voice Recognition

In this work, we demonstrate an ultrasensitive fiber-optic sensor featuring a record-low detection limit of 0.4 mPa and a rapid response time of 6 u s for acoustic detection.

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Ultra-High-Sensitivity Humidity Fiber Sensor Based on

In this study, an ultra-high-sensitivity fiber humidity sensor with a chitosan film cascaded Fabry-Perot interferometer (FPI) based on the harmonic

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A Simple Optical Fiber SPR Sensor With Ultra-High

Abstract This work reports a simple optical fiber Surface Plasmon Resonance (SPR) sensor with ultra-high sensitivity for simultaneous

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High-Sensitivity Fiber Optic Temperature Sensor Based on Enhanced

The accurate detection of temperature is crucial in industry, agriculture, military, and so on. This work implements a temperature sensor based on the enhanced Vernier effect principle, which is

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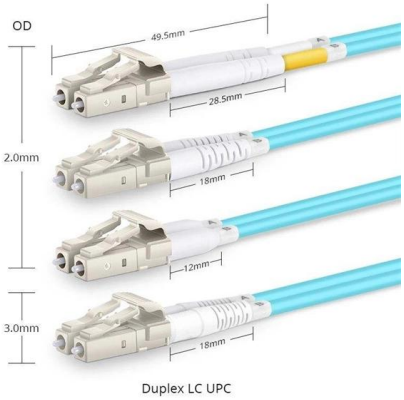

Ultra-sensitive fiber-optic temperature sensor based on UV glue-based

These fiber-optic temperature sensors are structurally stable, but they have the disadvantage of low sensitivity. In order to improve the sensitivity of fiber-optic temperature sensors,

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High sensitivity tapered fiber refractive index biosensor

Abstract A localized surface plasmon resonance (LSPR) sensor based on tapered optical fiber (TOF) using hollow gold nanoparticles (HAuNPs) for

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High-sensitivity refractive index sensor based on ultrafine conical no

This sensor offers high sensitivity, simple structure, and stability, making it ideal for medical, biological, and energy monitoring. A high-sensitivity refractive index (RI) sensor based on a

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Ultra-High Sensitive Fiber Optic Hydrogen Sensor in Air

Abstract: A compact fiber optic hydrogen sensing system employing self-referenced configuration and controllable light heating technologies, is proposed and experimentally

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Large-range and high-sensitivity fiber optic temperature sensor based

In this work, a fiber optic temperature sensor based on FPI combined with FBG is proposed, it can realize both high-sensitivity and large-range temperature measurement.

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Highly sensitive magnetic field sensor based on magnetic sensitive

The compact sensor is facile-manufactured and suitable for high-precision field measurements. A Fabry-Perot (FP) fiber optic sensor utilizing ferrofluid nanomaterials is proposed for

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