Novel Fiber Optic Isotope Sensor

Explore fiber optic sensors: their working principles, types (intrinsic, extrinsic, hybrid), and diverse applications in mechanical, chemical, and structural health monitoring.

In this Research Topic, the latest research works covering both the model simulation and experimental studies on the structural design, device preparation, and sensing performance ...

This Editorial brings attention to several notable contributions, showcasing advancements in the design, functionality, and implementation of fiber-optic sensor technology.

To overcome the limitation of different heterodyne detection methods and to integrate their advancement, the paper proposes a high-precision optical fiber sensor system with a novel ...

This book describes important recent developments in fiber optic sensor technology and examines established and emerging applications in a broad range of fields and markets, including power ...

A novel fiber-optic sensor based on all-fiber up-taper-core-offset-up-taper structure is proposed and investigated. The sensor is fabricated by splicing a large core offset between a pair of up tapers in ...

This optical setup has the advantage of allowing the use fiber-optic O 2 probes with different diameters (e.g. from 100 µm to 1 mm), and thus different sensor sizes, while achieving a ...

An overview of truly remote fiber optic sensors is presented in this work. It starts with a brief introduction of fiber optic sensor networks, showing their advantages and multiple applications.

Herein, we report the development of a novel sensor combining electrochemistry, localized surface plasmon resonance (LSPR) in nanoparticles, and fiber-optic sensing for the first time.

In this paper, the fabrication technology, characteristics, development status and application scenarios of different special optical fiber structures are briefly reviewed, including ...

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