

# The Role of Concentrators in Fiber Optic Sensors

The review highlights the methods and techniques used to overcome the sensing challenges. Finally, prospect of future developments of fiber-optic ...

Optical fiber sensors (OFSs) have emerged as essential tools in the monitoring of physical, chemical, and bio-medical parameters in harsh situations ...

Brief theory of sensing principle, fabrication method, applications, advantages and disadvantages of the different fiber-optic sensors, are addressed. ...

While luminescent concentrators (LCs) are mainly designed to harvest sunlight and convert its energy into electricity, the same concept can be advantageous in alternative applications.

Combining diamond NV centers to optical fibers provides a way for achieving magnetic sensors with high integration and portability. Meanwhile, new methods or techniques are urgently desired to ...

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This review paper explores the latest developments of different types of optical fiber sensors in the biomedical field, challenges, and future prospects, highlighting their transformative ...

The review highlights the methods and techniques used to overcome the sensing challenges. Finally, prospect of future developments of fiber-optic sensors is summarized.

One of the key properties is sensitivity. In this contribution, Shao et al. report a technique to highly improve the sensitivity of such an optical-fiber quantum magnetometer via magnetic flux concentrators.

A communications system component that multiplexes a number of separate incoming fiber optic communications channels.

Merritt N. Deeter on-garnet iYIGI sensing element and two flux concentrators are described. The system design exploits the technique of polarization-rotated reflection in which a single polarization ...

Fiber-optic technology emerged originally for applications in data transmission and telecommunications. However, sensors based on fiber-optics have been developed rapidly because ...

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We demonstrate that the light excitation and capturing efficiency of fluorescence based fiber-optical sensors can be significantly increased by using a CPC (Compound Parabolic ...

Here we show that high-permeability magnetic flux concentrators, which collect magnetic flux from a larger area and concentrate it into the diamond sensor, can be used to improve the ...

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