Liquid Crystal Fiber Optic Sensor

Herein, we propose and demonstrate a novel microtip highly sensitive temperature sensor, consisting of a tapered hollow-core fiber (HCF) filled with glycerol and CLCs. We use reflectance spectroscopy to ...

In this paper, we proposed an electric field intensity sensor based on Mach-Zehnder interferometer (MZI) based liquid crystal (LC) filled photonic ...

A new fiber-optic temperature sensor has been developed, based upon selective reflection from a cholesteric liquid crystal. The change of reflected-light intensity can be 40 times larger than ...

Liquid crystal (LC) devices and optical fibers are both technologies which have matured over the past 20 years, with each year bringing new advances in these exciting areas.

In this study, a temperature sensor with a wide measurement range, high sensitivity, and simple fabrication process was proposed by directly integrating polymerizable cholesteric liquid ...

Liquid crystal based fiber optic sensors exhibit a number of positive character istics. They are low cost, as the materials themselves are intrinsically inexpensive, and very small quantities are required.

As a result, a liquid crystal optical fiber sensor with the structure of FBG-FP based on the Vernier effect can be utilized for temperature measurements. This work offers a reliable and accurate ...

In this paper, we proposed an electric field intensity sensor based on Mach-Zehnder interferometer (MZI) based liquid crystal (LC) filled photonic crystal fiber (PCF) embedded in optical fiber ring laser (FRL).

Here, we propose a CLC device that is fabricated by vertically forming the helical axis of the CLC between the cross-sections of two optical fiber ferrules. It can be used as a device for fiber ...

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