Experiment on Temperature Characteristics of Fiber Optic Sensor

This work implements a temperature sensor based on the enhanced Vernier effect principle, which is comprised of a Fabry-Perot interferometer and a fiber optic Sagnac interferometer with slightly ...

In this paper, we studied the temperature impact on the operation of optical elements that make up a fiber optic current sensor. Each element ...

In this paper, the effects of structural parameters and assembly materials on the sensitivity of SNCS optical fiber sensor are studied by far from the cut-off condition. The correctness ...

In this article, multiple temperature sensing functions of a thymol blue dyed optic fiber were calibrated and compared with each other. The analyzed fluorescence characteristics including ...

Based on these problems, this paper focuses on analyzing and researching the FOCS temperature characteristics by considering the influence of linear birefringence from the polarization ...

In this chapter, a temperature sensor is demonstrated based on four different techniques; intensity modulated fiber optic displacement sensor (FODS), lifetime measurements, microfiber loop resonator ...

This experiment takes the method of placing optic fiber and grating in constant temperature water for heating. Constant temperature water tank is facility to set the initial reference ...

This paper describes thermal cycling tests of distributed fiber optic temperature sensors to characterize stability over a temperature range of 20 - 600°C. Stability and repeatability under ...

This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high-temperature sensors, as well as recent significant ...

thods for measuring the temperature near the tip of the optical fiber. To achieve this, previous studies have proposed several methods, such as inscribing fiber Bragg gratings (FBGs) [1,2] or long-period ...

In this paper, we studied the temperature impact on the operation of optical elements that make up a fiber optic current sensor. Each element responds differently to changes in ambient...

A high-sensitivity fiber optic temperature sensor based on the enhanced harmonic Vernier effect (HVE) is proposed, which consists of two Fabry-Perot interferometers (FPI) that are ...

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The paper deals with the overview of fiber optic methods suitable for temperature measurement and monitoring. The aim is to evaluate the current research of temperature measurements in the interval ...