Temperature Measurement Experiment Based on Fiber Optic Sensing Technology

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, a fiber probe high-temperature sensor based on the Michelson Interferometer (MI) is proposed and experimentally verified. We used a fiber splicing machine to fabricate a taper of the ...

This study compares two increasingly common heat tracing methods to locate discrete groundwater discharge: direct-contact measurements made with fiber-optic distributed temperature ...

To improve the sensitivity measurement of temperature sensors, a fiber optic temperature sensor structure based on the harmonic Vernier effect with two parallel fiber Sagnac interferometers (FSIs) ...

It is a single point contact temperature measurement system. A Fluorescent sensor is formed at the tip of the Optical Fiber. The other end of the fiber is attached to a light source . The light source is used ...

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 ...

This work demonstrates a novel fiber-optic sensing architecture that successfully breaks the conventional trade-off between measurement range and sensitivity in interferometric temperature ...

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 ...

In this work, we develop an all-optical temperature sensing system based on a fiber interferometer. To en-hance robustness against external disturbances, the EKF method is applied, in ...

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