GDR Telecom Site Energy Systems

Ultra-high temperature fiber optic sensing

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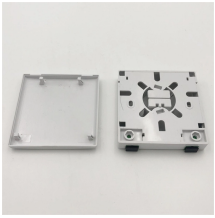
This article provides a comprehensive introduction to fiber-optic sensors, also called optical fiber sensors. It explains how these devices use optical fibers to measure quantities like temperature, ...

This paper proposed a fiber optic temperature sensor with an ultra-wide detection range based on the polydimethylsiloxane (PDMS) film-coated tapered single-mode fiber (SMF).

Abstract: we report a sapphire Fabry-Perot cavity based fibre optical temperature sensor that is capable of operating at elevated temperatures > 1000°C for prolonged periods of time.



The ultra-high sensing resolution and large dynamic range in the field of fiber sensors are inherently contradictory. In this study, we present a fiber ring sensor based on the Pound-Drever-Hall ...

We propose and present a high temperature fiber optic sensor based on an intrinsic sapphire Fabry-Pérot interferometer and a single mode interrogation system for temperature measurements up to ...

	This work presents a highly responsive fiber-optic temperature sensor that leverages the unique properties of silicon to overcome these limitations. The proposed sensor has a resolution of about 5 ...
	This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high-temperature sensors, as well as recent significant progress in the transition of ...
	A fiber-optic extrinsic Fabry–Perot interferometric (EFPI) temperature sensor with extremely high resolution and large dynamic range is proposed and demonstrated.

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