Linearity of Fiber Optic Grating for Temperature Measurement

In this study, the effects of FBG parameters such as grating length, Bragg wavelength, and reflection rate on temperature sensitivity have been investigated considering there are no strain ...

An optical fiber sensing scheme for decoupled strain and temperature measurement is investigated based on a cascaded microfiber interferometer-fiber Bragg grating (MFI-FBG) ...

In sensing applications, the main performance parameters depend on the application and the time scale of the measurement. For static, long term, low frequency applications (e.g. temperature/pressure ...

In this work, we propose a tilted fiber Bragg grating (TFBG) sensor for temperature measurements. The grating is inscribed using a femtosecond laser and the lin.

The temperature-dependent change of the refractive indices of the fiber, consequently the shift of its Bragg wavelength, is used as a measure of the temperature.

Over decades, fiber-optic temperature sensors based on conventional single-mode fibers (SMF) have been demonstrated with either high linearity and stability in a limited temperature region or poor ...

In this study, an optical fiber sensor was proposed for the temperature monitoring of Li-ion batteries. The proposed sensor consists of a metal ring and a fiber Bragg grating (FBG),...

An optical temperature sensor based on linear cavity erbium-doped fiber laser is proposed in this work. A fiber Bragg grating is utilized in the laser cavity as the sensor head for ...

This work introduces a fiber-optic temperature sensing system that synergistically combines a Sagnac interferometer (SI) and a Fiber Bragg Grating (FBG) within a fiber ring laser ...

Abstract: In recent years there has been considerable interest in developing photonic temperature sensors such as the Fiber Bragg gratings (FBG) as an alternative to resistance thermometry. In this ...

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