

In this study, we present the first fabrication of a ZEONEX-based polymer optical fiber (POF) with a twin-core structure for torsion measurements.

To overcome these issues, we have proposed various compliant fiber-optic based force and torque sensors that have proved their capabilities to accurately measure force and torque in three and six ...

he speed, torque and power of a rotating shaft has been fabricated and tested. The sensor provides a direct measurement of shaft rotation. speed and shaft angular twist, from which torque and power.

We report a novel and highly sensitive torsion sensor that integrates a multicore fiber (MCF) within a Sagnac interferometer so that the same MCF segment serves as both the reflective ...

This paper presents a conceptual sensor design for planar force/torque measurement based on fiber optic sensing. The design includes two rigid bodies, one acting as a reference frame ...

In this paper, we present the results of an extensive field experiment conducted to evaluate the torque measurement accuracy of this novel sensing solution installed on the gearbox of a Gamesa G97 2 ...

In order to realize high precision real-time measurement of torque, a high sensitivity torque sensor based on high power output fiber is proposed. The excitation

By fixing two FBGs on the surface of a rotating shaft along the direction of $\pm 45^\circ$; and using dynamic wavelength demodulation technology, we propose an optical fiber sensing system to monitor the ...

With this contribution we showed, that it is possible to realize a fiber optic sensor which is by design capable of measuring forces and torques in all six degrees of freedom.

In this paper, an optoelectronic torque measurement system that employs highly precise and sensitive four-quadrant photoelectric sensors to measure the torque applied to the shaft is ...



Fiber optic sensors can measure torque

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