

This paper presents mechanically induced long-period gratings (MILPGs) realized in standard and unconventional optical fibers, like not-photosensitive double-clad and photonic crystal fibers.

Explore the fundamentals and uses of long-period gratings in optics, including their fabrication and characterization.

Abstract: A promising technique for inscribing long period fiber gratings (LPFGs) was demonstrated by only using a commercial splicer. The commercial splicer was developed ...

Here, we report an attractive all-optical control of long-period fiber grating (LPFG) by taking advantage of MXene's excellent photothermal conversion property. MXene is utilized as the ...

In this work, we investigate modification of transmission spectra of long-period fiber grating structures with an acoustic shock front propagating along the fiber.

The strain response of a long-period fibre grating arise due to the physical elongation of the fibre, changing the grating pitch and the effective refractive index of the core and cladding due to the ...

This paper presents a review of the evolution of LPFGs, with a specific focus on the progression and current trends of mechanically induced long-period fiber gratings.

A long-period fiber grating couples light from a guided mode into forward propagating cladding modes where it is lost due to absorption and scattering. The coupling from the guided mode to cladding ...

In this framework, we report about fiber optic-based devices achieved with the support of stereolithography (SLA) printing technique. Specifically, long period gratings (LPG) have been ...

In this paper, we propose a new technique to fabricate long period gratings (LPGs) by mechanically applying a force to an optical fiber enclosed in a low-cost periodic 3-D printed polymeric...

In this paper, we developed and experimentally evaluated a new type of long-period fiber grating. This structure is fabricated by CO₂ laser polishing and subsequent heating with an ...

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