Fabrication of Long-Period Fiber Gratings

Fabrication methods of long-period fibre gratings. The inscription of long-period gratings on optical fibre basically consists in the generation of a periodical perturbation of the refractive index in the core, the ...

We have fabricated long-period fiber gratings by use of a novel technique using focused irradiation of infrared femtosecond laser pulses. We investigate the thermal stability of the fabricated fiber gratings.

Fabrication of high quality LPFGs based on TCF with EAD technique has been demonstrated for the first time. Then the RI, temperature and strain sensing characteristics were also ...

Abstract: We propose to inscribe a compact and reproducible long-period fiber grating (LPFG) in a standard single-mode fiber by a CO2-laser splicer that allows twisting the fiber stepwise ...

This review provides a comprehensive analysis of the primary fabrication techniques enabling this approach, including CO2 laser inscription, femtosecond laser micromachining, electric ...

Afterwards, the fabrication of long period fiber gratings, in particular, in the turning points is discussed. The main properties of LPFGs, which include the thermal behavior and the ...

We develop a two-step infrared (IR) femtosecond fiber laser exposure technique to flexibly fabricate long period fiber gratings (LPFGs) with a high peak band-rejection efficiency of 35.4...

In this paper, a new core modulation method is proposed for the first time. A novel long period fiber grating with arched fiber core is fabricated and the sensing characteristics are investigated.

In this work, we reviewed the most important achievements of INESC TEC related to the fabrication of long-period fiber gratings using the electric arc technique.

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