Special Issue

LIPSS (Laser-Induced Periodic Surface Structures) Based Sensors in Intelligent Manufacturing

Message from the Guest Editors

when solids are exposed to linearly polarized laser radiation, a phenomena known as Laser Induced Periodic Surface Structures (LIPSS) occurs. Typically, they manifest as a surface relief made up of periodic or quasiperiodic lines that display a strong link to both the wavelength and the polarization of the radiation. These structures can be produced on practically every material (metals, semiconductors, and dielectrics). LIPSS nanostructuring has demonstrated its efficiency in important applications including the creation of geometrical phase elements, gas sensing, enhanced tribological qualities towards drag reduction, cell migration control, or structural colorization. As a result, their use has the potential to enhance the functionality of numerous applications. This Special Issue is addressed to all types of sensors and related devices in which LIPSS play a prominent part. Keywords:

- LIPSS
- Femtosecond
- Laser
- Nanostructuring

Polarization

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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