



Laser-Induced Crystallization

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Message from the Guest Editors

The laser is a formidable tool for materials science. Lasers are monochromatic and can have a large intensity that can be focused at the ultimate limit, thus making them especially suited to direct laser writing. Furthermore, the femtosecond laser (a laser with pulses of ten to hundreds of 10^{-15} s) is a new laser that became possible thanks to the invention of amplification by Prof. Gérard Mourou and Donna Strickland (Nobel Prize 2018) Its pulses are so energetic that it is possible to interact with any material, even those that are transparent, such as window glass. The possibilities for lasers in materials science are numerous. Some are already in use in industries for surface machining and shaping materials. Others are well on the way to being used for designing at the micron-scale refractive index (optical waveguides) and birefringence in transparent glasses, while other properties are also being studied. This opens new possibilities in integrated or free optics, rendering possible new applications towards the elaboration of optical devices by optics for optical use and for a safe future.





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Message from the Editor-in-Chief

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