Intense Optical Pulse Processing

Message from the Guest Editor

Intense optical pulse processing, utilizing either xenon flash lamps or lasers, allows a fast and selective heating of materials. The thermal processing times can be reduced down to milliseconds or nanoseconds. The processing can be precisely limited to the material surface with a minimal thermal exposure of the whole solid body. The achievable final temperature of the surface layer can be more than 2000 °C depending on the intensity of the light pulse and on the optical properties of the material. Therefore, intense optical pulse can be used for various applications in recrystallizing implanted semiconductors, solar cells, roll-to-roll flexible electronics, etc.

This Special Issue invites submissions on aspects of material processing by utilizing an intense optical pulse, including full papers, communications and reviews. Topics can include, but are not limited to, the following:

- Doping semiconductors
- Thin film solar cells
- Energy materials
- Flexible electronics
- Ion beam modified materials
- Roll-to-roll processing
- Flash lamp annealing
- Pulsed laser melting

Deadline for manuscript submissions:
31 October 2019
Editor-in-Chief

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers fourteen comprehensive topics: Biomaterials; Energy Materials; Composites; Structure Analysis; Porous Materials; Manufacturing Processes; Advanced Nanomaterials; Smart Materials; Thin Films; Catalytic Materials; Carbon Materials; Materials Chemistry; Materials Physics; Optics and Photonics; Corrosion; Building Materials. The distinguished and dedicated editorial board and our strict peer-review process ensure the highest degree of scientific rigor and review of all published articles.

Materials provides an unique opportunity to contribute high quality articles and to take advantage of its large readership.

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Rapid publication: manuscripts are peer-reviewed; a first decision is provided to authors approximately 14.2 days after submission; acceptance to publication in 5 days (median values for papers published in materials in the second half of 2018).

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