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Intense Optical Pulse Processing

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Deadline for manuscript submissions:
closed (31 December 2019)

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

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