



Laser Shock Processing and Related Phenomena

Guest Editors:

Prof. Dr. José L. Ocaña

Department of Applied Physics
and Materials Engineering, E.T.S.
Ingenieros Industriales,
Polytechnical University of
Madrid, 28040 Madrid, Spain

Prof. Dr. Janez Grum

Faculty of Mechanical
Engineering, University of
Ljubljana, Askerceva 6, 1000
Ljubljana, Slovenia

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Message from the Guest Editors

Laser Shock Processing (LSP) has been developed as an effective technology for improving the surface and mechanical properties of metallic alloys. The level of maturity of Laser Shock Processing has been increasing during the last few years, and several thematic international conferences have been organized (the 7th ICLPRP will be held in Singapore, June 17–22, 2018), where different developments on a number of key aspects have been discussed, i.e.:

- Fundamental Laser Interaction Phenomena
- Material Behavior at High Deformation Rates/Under Intense Shock Waves
- Laser Sources and Experimental Processes Implementation
- Induced Microstructural/Surface/Stress Effects
- Mechanical and Surface Properties Experimental Characterization and Testing
- Numerical Process Simulation
- Development and Validation of Applications
- Comparison of LSP to Competing Technologies
- Novel Related Processes

which have been treated by renowned specialists, providing a firm basis for the further development of the technology in its path to industrial penetration.





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Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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Metals Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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