Special Issue

Materials Formed under Extreme Conditions in Additive Manufacturing: Creation of Materials by Super-Thermal Field

Message from the Guest Editors

Additive manufacturing (AM) is a process that creates materials with unique microstructures and properties under extreme conditions such as high cooling rates, temperature gradients, and solidification rates. These conditions affect various materials. However, the characteristics of these materials depend on their physical properties and the process conditions. Therefore, there have been various attempts to control the microstructure in AM by applying specially designed processes and optimizing the parameters. This Special Issue aims to present the latest research on materials with unique microstructures and properties formed under extreme conditions in AM. This special issue was organized by the Organizing Committee of the international conference "Creation of Materials by Super-Thermal Field (CMSTF) 2023," which will be held in Osaka from November 15 to 17, 2023. Submissions are encouraged in conjunction with participation in the conference, but we welcome submissions regardless of whether you are able to attend. For more detail about the conference, please visit the website of the conference at https://www-mat.eng.osaka-u.ac.jp/CMSTF2023/

Guest Editors

Prof. Dr. Yuichiro Koizumi

Prof. Dr. Takayoshi Nakano

Prof. Dr. Yoshitaka Adachi

Prof. Dr. Kouhei Morishita

Dr. Kazuhisa Sato

Dr. Toda Yoshiaki

et al.

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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