Special Issue

Advances in Metal-Based Multi-Material Additive Manufacturing

Message from the Guest Editor

Additive manufacturing techniques open up a wide range of new possibilities in application and research. These processes combine high geometric degrees of freedom with new potentials for alloy design resulting from high cooling rates. While a great level of understanding has been achieved for additive manufacturing of single materials through experimentation and modeling, little is known about implementing a combination of materials into additive manufacturing processes. I would like to invite you to contribute to this current research topic with this Special Issue. Potential topics may include:

- Additive manufacturing of metallic compounds or graded materials with Laser Powder Bed Fusion, Direct Energy Deposition, or other AM processes, whereby for composites the substrate can already represent a component
- Experiments and models to gain knowledge on process conditions
- Experiments and theories of thermophysical properties for the composition of mixing zones to obtain a deepened understanding of the multi-material process
- Multimaterial applications through combination of different mechanical or functional properties

Guest Editor

Dr. Nils Ellendt

Particle and Process Engineering, Faculty of Production Engineering, University of Bremen, Bremen, Germany

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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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