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Atomization of Metallic Melts

Guest Editor:

Dr. Nils Ellendt
Particle and Process Engineering, Faculty of Production Engineering, University of Bremen, Bremen, Germany

Deadline for manuscript submissions:
closed (31 May 2021)

Message from the Guest Editor

Dear Collegues,

The atomization of metallic melts is a process that allows the generation of a defined droplet spectrum in the form of a spray. With the knowledge of the processes taking place in the spray, the droplets can be solidified to a metal powder. The atomization conditions and the associated droplet sizes, velocities, trajectories, and concentrations determine the processes taking place in the spray, such as cooling, solidification, and formation of the particle morphology. The history of the droplets determines properties such as their microstructure or flowability, which are important for subsequent processes, such as additive manufacturing or powder metallurgical routes.

The focus of this Special Issue is on the relationship of atomization conditions and resulting material properties. In this context, fundamental investigations on single droplets may be as suitable as investigation on gas atomization processes. Models for the application of detailed findings from single droplets to complex sprays allow the determination of new process windows for atomization.

It is my pleasure to invite you to submit your manuscript for this Special Issue.

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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

Message from the Editor-in-Chief

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Journal Rank: JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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