Special Issue

Powder Metallurgy of High-Entropy Alloy

Message from the Guest Editors

Recently, the high-entropy alloys (HEAs), medium entropy alloys and/or multi-principal element alloys have attracted significant interest. Powder metallurgy (PM) has been proven to be a reliable and not too expensive method capable of relatively easy and efficient production of HEAs. Compared to casting, PM requires lower temperatures for its processing, since it can be produced through solid state sintering. Nevertheless, there are open problems to be fixed, e.g. oxides and/or other secondary phase particles formation, routes to optimise microstructure relating to HEAs performance under mechanical loading etc. In this Special Issue, articles will be invited that focus on separate steps of mechanical alloying and HEAs powder preparation and characterisation methods, their influence on sinterability by different techniques and the final materials' performance both from the powder stage and/or compaction stadium. Fast and low-cost processes especially remain of interest, being fully controllable and with a high implementation potential.

Guest Editors

Prof. Ivo Dlouhý

Institute of Physics of Materials, Czech Academy of Sciences and Institute of Materials Science and Engineering, Brno University of Technology, Brno, Czech Republic

Dr. Hynek Hadraba

Institute of Physics of Materials, Czech Academy of Sciences, Brno, Czech Republic

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

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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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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

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