Special Issue

3D Printing of Hardmetals

Message from the Guest Editor

Tools made from hardmetals, cemented carbides, and/or cermets are essential for the industrial fabrication of many products in life science, automotive, oil and gas, and other areas of manufacturing. With increasing changes in production and the need to machine and shape new materials, new challenges for tool materials are also arising. To address many of them, additive manufacturing or 3D printing of hardmetals and cermets will be a solution to shorten the developing time for new tools, for on-site production, and to allow new geometrical freedom to increase performance in cutting, drilling, shaping, and all the other applications where hardmetals and cermets are used. However, hardmetals and cermets are quite unique in their microstructure and composition and work done in their additive manufacturing in the past has often resulted in insufficient material properties, which are not good enough for most applications. Thus, new and advanced additive manufacturing approaches and techniques are sought after in the industry.

Guest Editor

Dr. Johannes Pötschke
Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany

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

mdpi.com/journal/metals

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

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