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Manufacturing and Materials Processing

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Spark Plasma Sintering: Mechanisms, Materials, and Technology Developments

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Deadline for manuscript submissions:
closed (31 December 2021)

Message from the Guest Editors

In the last decade, spark plasma sintering (SPS) has emerged to be a very efficient way to fast processing of advanced materials. This led to an evolution in the development of the process through flash spark plasma sintering, high-pressure configurations, low temperature sintering, complex shapes, etc. Nevertheless, these evolutions highlight the challenges of SPS, namely, temperature, pressure, and electrical current homogeneity; scalability; development of complex shapes; and productivity. This Special Issue of *JMMP* is dedicated to SPS and to new developments of this process. Special attention will be given to studies addressing the main challenges of SPS technology via modeling of the multiphysics fields, understanding the sintering mechanism, the electrical current's effect on sintering, and the development of innovative SPS approaches. The following topics are encouraged in this Issue:

- specific sintering mechanisms study;
- multiphysics/multiscale modeling of SPS;
- flash sintering;
- high-pressure SPS;
- low temperature SPS;
- complex shapes;
- SPS potential for production and scalability.

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Message from the Editor-in-Chief

Journal of Manufacturing and Materials Processing (*JMMP*) (ISSN 2504-4494) is a new MDPI peer-reviewed, open access venue with a focus on the scientific fundamentals and engineering methodologies of manufacturing and materials processing. We offer an online platform facilitating effective exchange of innovative scientific and engineering ideas and the dissemination of recent, original, and significant research and developmental findings. On behalf of the Editorial Board, I extend an invitation to our scientific and engineering colleagues to contribute high-quality, innovative, and ground-breaking research articles to *JMMP*.

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