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High-Performance Additive Manufacturing and Welding of Metals and Alloys

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Message from the Guest Editors

Additive manufacturing (AM) is a key technique driving Industry 4.0. In the era of Industry 4.0, AM/Welding is emerging as a valuable digital technique that offers virtually limitless possibilities for manufacturing (from tools to mass customization) in all industries. To date, AM and welding have been extensively researched. Various fusion-based AM/welding techniques that feature electric arcs, lasers, or electron beams as the heat source to build objects through material melting/solidification have become mainstream. In order to minimize solidification-related problems, in recent years, many solid-state AM/welding techniques (e.g., based on cold spraying or friction processing) have been proposed, attracting great attention from both scientific and industrial communities. Moreover, AM/welding focusing on the metals and alloys is also of great interest.

There is an increasing focus on the research and development of novel die attach materials that exhibit high-temperature reliability and can be specifically tailored to the unique requirements of WBG devices.

This Special Issue will consist of high-quality original research papers related to the overlapping fields.



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Special Issue



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Message from the Editor-in-Chief

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