

## Special Issue

# Laser Powder Bed Fusion Additive Manufacturing: Experimental, Simulation, and Machine Learning

### Message from the Guest Editors

Laser powder bed fusion (LPBF) additive manufacturing represents a cutting-edge frontier in the field of advanced manufacturing technologies. Distinguished for its precision and versatility, LPBF continues to revolutionize how we approach design and production across various industries. This Special Issue is dedicated to exploring the expansive and dynamic realm of LPBF, highlighting the synergy between experimental methods, simulation techniques, and the burgeoning field of machine learning. We invite researchers, academics, and industry professionals to contribute their latest research papers, communications, and reviews on the experimental, simulation, and machine learning aspects of LPBF. This issue aims to cover a wide spectrum of topics, including, but not limited to, alloy development, process parameter optimization, microstructure analysis, thermal modeling, and data-driven process control in LPBF.

### Guest Editors

Dr. Congyuan Zeng

Dr. Wangwang Xu

Dr. Shafiqur Rahman

### Deadline for manuscript submissions

closed (20 December 2024)



## Materials

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### Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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