

Special Issue

Microstructure Design of Materials via Machine Learning: Advantage, Challenges, Applications, and Perspectives

Message from the Guest Editors

This Special Issue aims to gather the latest advances in the field of the microstructure design of materials using machine learning techniques, focusing on the advantages, challenges, applications, and perspectives of the microstructure design of materials using machine learning. We are particularly interested in novel structures, algorithms, and methodologies that exploit the potential of machine learning to optimize material microstructures for achieving enhanced properties. Additionally, unconventional applications, such as measurement techniques and computational models, that contribute to microstructure development are also encouraged.

We encourage submissions that explore various material systems and properties, as well as studies that highlight the potential and limitations of machine learning in the microstructure design of materials. We believe that this Special Issue will offer a comprehensive overview of the advantages, challenges, and future perspectives of material design through machine learning.

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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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