

# JOM Call for papers

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## ***Bridging Scale Gaps in Multiscale Materials Modeling in the Age of Artificial Intelligence***

Multiscale Materials Modeling has seen decades of efforts and progress, but challenges remain in bridging different length/time scales across models. Lower-scale simulation results are difficult to construct into physics-based constitutive equations, hampering their transferability to higher-scale models. These challenges intensify with growing interest in chemically complex materials and extreme conditions in advanced materials processing. The emergence of data-driven techniques – particularly artificial intelligence (AI) – offers new possibilities to overcome these obstacles. This special topic focuses on the integration of computational materials science and AI, highlighting their applications in bridging different-scale models, towards a better explanation/prediction of relevant experimental observations.

Original research papers should be 3,000-9,000 words with up to 12 figures maximum; review papers should be 6,000-11,000 words with up to 20 figures maximum.

Detailed author instructions are available at:  
<http://www.tms.org/AuthorTools/>

**Keywords for this topic:** Computational Materials Science & Engineering; Computer Applications and Process Control; Cyber Infrastructure; ICME; Modeling and Simulation; Multiscale Materials Modeling; Artificial Intelligence

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