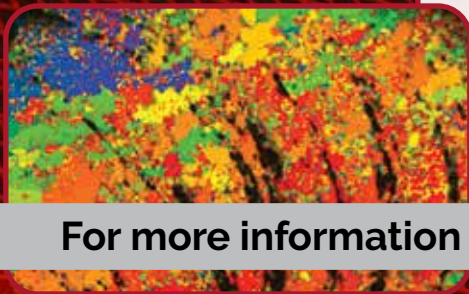
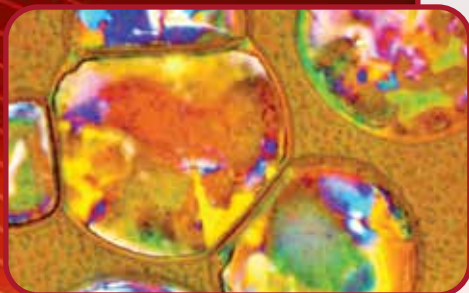


# JOM Call for papers

An official publication of The Minerals, Metals & Materials Society



**Publication Date:** *October 2025*

**Manuscript Deadline:** *April 1, 2025*

## ***Advancements in Characterization and Modeling of Nuclear Materials***

This topic focuses on cutting-edge characterization techniques including but not limited to novel electron microscopy, spectroscopy, neutron scattering, atom probe tomography, and in situ approaches to elucidate nuclear materials phenomena. These highlight roles in identifying defects, phase transformations, and performance degradation mechanisms. Moreover, it addresses recent multiscale modeling advancements, including implementation of machine learning, accelerated simulation paradigms, and 3D/4D techniques to understand fundamental processes in material synthesis and performance within nuclear environments across scales. Research bridging different length and time scales and capturing multi-physics and integrating characterization and modeling techniques synergistically, is especially encouraged.

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:** **Characterization; Computational Materials Science & Engineering; Modeling and Simulation; Nuclear Materials; Phase Transformations**

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