JOM Call for papers

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Microstructure Evolution: Structural Materials for Advanced Reactors

The recent rapid progress in advanced nuclear reactor technologies demands the advancement of structural materials capable of withstanding the challenging operation conditions inside reactors, e.g., intensive radiation, high temperatures, and corrosive coolants. The microstructure of structural materials is essential for understanding their properties in such extreme environments. The main objective is to solicit frontier research on various microstructural aspects of structural materials under reactor environments. The key areas of this special topic include characterizing, comprehending, and predicting the microstructure evolutions by leveraging multiscale computational modeling, advanced characterization techniques, or the combination of both.

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: Advanced Materials; Characterization; Computational Materials Science & Engineering; Experimental Methods; Fundamentals; Radiation; Corrosion; Microstructure; Characterization; Simulation

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Committee Sponsor(s): Advanced Characterization, Testing, and Simulation

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