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# Nuclear Materials and Their Derivatives: Synthesis, Structure, and Properties

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## Message from the Guest Editors

Nuclear materials and their derivatives are important for nuclear energy and related applications. Structure, phase transition, stability, mechanical and thermodynamic properties, lattice dynamic properties, neutron and charged particle radiation effects of the entire fuel cycle, actinides and their compounds under different external conditions need careful investigation. Many related synthesis methods and simulation techniques are in development. The deep physical insights and theoretical understanding have greatly promoted further developments and applications of nuclear materials.

This Special Issue aims to provide a unique international forum for researchers working in nuclear materials to report their latest endeavors in advancing this field, including new pristine nuclear materials, methods used to improve nuclear materials and their performance, theoretical understanding and physical insights into nuclear materials and their derivatives, synthesis and structural characterization of nuclear materials, computational discovery of new nuclear materials, physical and chemical properties of nuclear materials, and so on.

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## Message from the Editor-in-Chief

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