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**TMS2024**  
153<sup>rd</sup> Annual Meeting & Exhibition

MARCH 3–7, 2024  
HYATT REGENCY ORLANDO  
ORLANDO, FLORIDA, USA  
#TMSAnnualMeeting



**SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:**

## NUCLEAR MATERIALS

### **Seaborg Institutes: Emerging Topics in Actinide Materials and Science**

The consortium of Seaborg Institutes and Center within the U.S. DOE national laboratory system has the common purpose of advancing the study of actinide science and encouraging the development of early career professionals in the fields of nuclear research. This symposium will be hosted by the four current Seaborg Institutes/Center and will feature emerging topics in actinide research. Advancing our understanding of the chemistry and physics of the actinide elements and their compounds is the primary goal of the Seaborg Institutes/Center.

The topical areas studied under the Seaborg Institutes/Center include fundamental actinide chemistry and physics directed at understanding f-electron behavior, the materials science and properties of nuclear fuels, nuclear fuel cycle chemistry and actinide separation science, nuclear forensics, actinide radiochemistry, and bio-actinide chemistry. This symposium will highlight recent results from the international community on actinide research relevant to the Seaborg Institutes/Center.

Topics of interest include but are not limited to:

- Preparation and purification of actinide elements and compounds
- Magnetic and electronic properties of actinides and actinide materials, including fundamentals of f-electron interactions and quantum phenomena (theory and experiments)
- Characterization and post irradiation examination of nuclear fuels
- Forensic identification and detection of actinide species
- Actinide radiochemistry and bio-actinide chemistry
- Novel approaches to chemical separations of actinide elements
- Innovation in methods for recycle of used nuclear fuels

#### ORGANIZERS

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