# Experimental and Theoretical Approaches to Actinide Chemistry

**John K. Gibson (Editor), Wibe A. de Jong (Editor)**

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**DESCRIPTION**

A review of contemporary actinide research that focuses on new advances in experiment and theory, and the interplay between these two realms.

*Experimental and Theoretical Approaches to Actinide Chemistry* offers a comprehensive review of the key aspects of actinide research. Written by noted experts in the field, the text includes information on new advances in experiment and theory and reveals the interplay between these two realms. The authors offer a multidisciplinary and multimodal approach to the nature of actinide chemistry, and explore the interplay between multiple experiments and theory, as well as between basic and applied actinide chemistry.

The text covers the basic science used in contemporary studies of the actinide systems, from basic synthesis to state-of-the-art spectroscopic and computational techniques. The authors provide contemporary overviews of each topic area presented and describe the current and anticipated experimental approaches for the field, as well as the current and future computational chemistry and materials techniques. In addition, the authors explore the combination of experiment and theory. This important resource:

- Provides an essential resource the reviews the key aspects of contemporary actinide research
- Includes information on new advances in experiment and theory, and the interplay between the two
- Covers the basic science used in contemporary studies of the actinide systems, from basic synthesis to state-of-the-art spectroscopic and computational techniques
• Focuses on the interplay between multiple experiments and theory, as well as between basic and applied actinide chemistry

Written for academics, students, professionals and researchers, this vital text contains a thorough review of the key aspects of actinide research and explores the most recent advances in experiment and theory.

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🌿 ABOUT THE AUTHOR

Edited by

**John K. Gibson**, is Senior Scientist, Lawrence Berkeley National Laboratory, USA. He is experienced in fundamental actinide chemistry research, ranging from solid state synthesis of transuranium compounds to actinide chemistry in the gas phase.

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