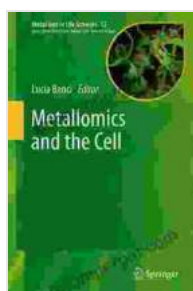


# Unveiling the Secrets of Cellular Life: Metallomics and the Cell

Over the last decade, the significance of metal ions in life sciences has gained widespread recognition, revolutionizing our understanding of cellular processes. Metallomics and the Cell: Metal Ions in Life Sciences 12 delves into the captivating world of metal-dependent phenomena, illuminating the intricate roles these elements play in shaping life.

Metal ions are not mere spectators in the symphony of life; they are active participants, serving as essential cofactors for countless enzymes, proteins, and nucleic acids. Iron, for instance, fuels oxygen transport and respiration, while calcium orchestrates myriad cellular events, including signaling, muscle contraction, and cell division.

Metallomics, a burgeoning field that seamlessly blends chemistry, biology, and medicine, provides invaluable tools to investigate metal ion interactions at the molecular level. This powerful approach has shed light on the intricacies of metal-binding sites, metal-ion trafficking mechanisms, and the profound influence of metal ions on gene expression and cellular metabolism.



## Metallomics and the Cell (Metal Ions in Life Sciences Book 12) by K. Kong Wan

★★★★★ 5 out of 5

Language : English  
File size : 12959 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Print length : 1243 pages

Item Weight	: 1.45 pounds
Dimensions	: 6.14 x 0.75 x 9.21 inches
X-Ray for textbooks	: Enabled
Hardcover	: 328 pages



Beyond their fundamental biological roles, metal ions also hold sway over human health. Essential metals such as zinc and selenium are indispensable for growth, development, and immunity. Conversely, exposure to toxic metals like lead and mercury can wreak havoc on tissues and organs. Metallomics plays a crucial role in deciphering the mechanisms underlying metal-induced toxicity and devising strategies for detoxification and protection.

*Metallomics and the Cell: Metal Ions in Life Sciences 12* is a comprehensive compendium of the latest advancements in the field, meticulously assembled by a team of distinguished experts. This volume presents a kaleidoscope of topics, ranging from the essential roles of metal ions in cellular metabolism to the therapeutic applications of metallodrugs.

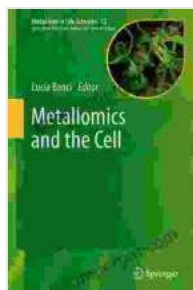
- **Essential Metal Ions in Life Sciences:** Unraveling the multifaceted contributions of essential metal ions to biological processes.
- **Metallobiomolecules:** Exploring the intricate structures and functions of metalloproteins, metalloenzymes, and other metal-containing molecules.
- **Metal Ions and Cellular Signaling:** Deciphering the pivotal role of metal ions in intracellular communication and signal transduction.

- **Metallo drugs and Theranostics:** Unveiling the promising applications of metal-based drugs and theranostic agents in disease diagnosis and treatment.

Metallomics and the Cell: Metal Ions in Life Sciences 12 caters to a wide audience of researchers, clinicians, and students with an interest in the fascinating interplay between metal ions and life. This volume is an invaluable resource for:

- **Biochemists and Molecular Biologists:** Gaining insights into the molecular mechanisms underlying metal ion functions and interactions.
- **Medical Scientists and Clinicians:** Exploring the health implications of metal ions and harnessing their therapeutic potential.
- **Environmental Scientists:** Understanding the impact of metal ions on ecosystems and developing strategies for remediation.

Metallomics and the Cell: Metal Ions in Life Sciences 12 is an indispensable guide to the ever-expanding world of metal ions in life sciences. This volume offers a panoramic view of the latest advancements in the field, providing a wealth of knowledge and inspiration for researchers and practitioners alike. Join the exploration into the fascinating realm of metal ions and unlock the secrets of cellular life.



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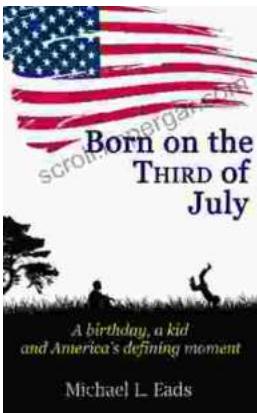
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