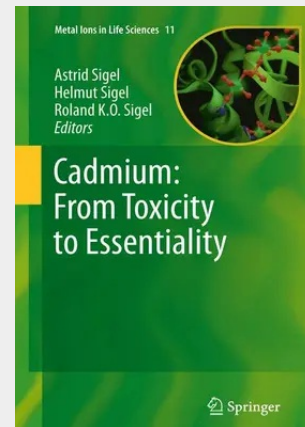


Cadmium: From Toxicity to Essentiality

Volume 11 provides in an authoritative and timely manner in 16 stimulating chapters, written by 40 internationally recognized experts from 11 nations, and supported by more than 2600 references, 35 tables, and over 100 illustrations, many in color, a most up-to-date view on the role of cadmium for life, presently a vibrant research area. MILS-11 covers the bioinorganic chemistry of Cd(II), its biogeochemistry, anthropogenic release into the environment, and speciation in the atmosphere, waters, soils, and sediments. The analytical tools for Cd determination, its imaging in cells, and the use of ^{113}Cd NMR to probe Zn(II) and Ca(II) proteins are summarized, as are Cd(II) interactions with nucleotides, nucleic acids, amino acids, and proteins including metallothioneins. The phytoremediation by Cd(II)-accumulating plants, etc., the toxicology of Cd(II), its damage to mammalian organs, and its role as a carcinogen for humans, are highlighted.

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