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Nota di contenuto	Preface -- Chapter 1 Amino acids functionalized inorganic metal nanoparticles: Synthetic nanozymes for target specific binding, sensing and catalytic applications -- Chapter 2 Thermal decomposition routes for magnetic nanoparticles: development of next-generation artificial enzymes, their phase transfer and biological applications -- Chapter 3 Nanozymes: Emerging Nanomaterials to Detect Toxic Ions -- Chapter 4 Applications of nanozymes in wastewater treatment -- Chapter 5 Aptamer mediated sensing of environmental pollutants utilizing peroxidase mimic activity of nanozymes -- Chapter 6 Nanozyme-based sensors for pesticide detection -- Chapter 7 Metal-based nanozyme: Strategies to modulate the catalytic activity to realize environment application -- Chapter 8 Nanozymes in Environmental Protection.
Sommario/riassunto	Protection of the environment is essential because pollution has become a global problem with many adverse effects on life and ecosystems. For that, remediation strategies and techniques have been designed, yet they are limited. Here, the recent development of nanotechnology opens a new vista for environmental remediation. In particular, nanomaterials displaying enzyme-like activities, named 'nanozymes', appear very promising for environmental monitoring, contaminant detection, microbial management, and degradation of organic pollutants. Nanomaterials including metallic, metal oxides and carbon-based nanoparticles with nanozymes activities have been

synthesized. These nanozymes have similar activities as natural peroxidase, oxidase, superoxide dismutase and catalase enzymes. Nanozymes have several advantages, yet they suffer from several limitations such as low catalytic efficiency, less substrate selectivity, biocompatibility, and lack of engineering of the active sites. This book reviews the latest developments and applications of nanozymes in environmental science.

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