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Nota di contenuto	Foreword; CONTENTS; Nanoparticle Based Approaches; Chapter 1. Nanoparticle Metal Oxides for Chlorocarbon and Organophosphonate Remediation Olga B. Koper, Shyamala Rajagopalan, Slawomir Winecki and Kenneth J. Klabunde; Chapter 2. Nanoscale Zero-Valent Iron (nZVI) for Site Remediation Daniel W. Elliott, Hsing-Lung Lien and Wei-xian Zhang; Chapter 3. Synthesis, Characterization, and Properties of Zero-Valent Iron Nanoparticles D. R. Baer, P. G. Tratnyek, Y. Qiang, J. E. Amonette, J. Linehan, V. Sarathy, J. T. Nurmi, C.-M.Wang and J. Ant; Nanostructured Inorganic Materials Chapter 4. Formation of Nanosize Apatite Crystals in Sediment for Containment and Stabilization of Contaminants Robert C. Moore, Jim Szecsody, Michael J. Truex, Katheryn B. Helean, Ranko Bontchev and Chapter 5. Functionalized Nanoporous Sorbents for Adsorption of Radioiodine from Groundwater and Waste Glass Leachates S. V. Mattigod, G. E. Fryxell and K. E. Parker; Nanoporous Organic/Inorganic Hybrid Materials; Chapter 6. Nature's Nanoparticles: Group 4 Phosphonates Abraham Clear.eld Chapter 7. Synthesis of Nanostructured Hybrid Sorbent Materials Using

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Sommario/riassunto

This volume is concerned with functional nanomaterials: materials containing specific, predictable nanostructure whose chemical composition or interfacial structure enable them to perform a specific job - destroy, sequester or detect some material that constitutes an environmental threat. Nanomaterials have a number of features that make them ideally suited for this job: high surface area, high reactivity, easy dispersability, and rapid diffusion. The purpose of this book is to showcase how these features can be tailored to address some of the environmental remediation and sensing/detection

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