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Nota di contenuto	Chapter 1 Introduction -- Chapter 2 Adsorption Isotherms in Liquid Phase: Experimental, Modeling and Interpretations -- Chapter 3 Adsorption Kinetics in Liquid Phase: Modeling for Discontinuous and Continuous Systems -- Chapter 4 Hydrothermal Carbonisation: An Eco-friendly Method for the Production of Carbon Adsorbents -- Chapter 5 Removal of Heavy Metals, Lead, Cadmium and Zinc, Using Adsorption Processes by Cost-effective Adsorbents -- Chapter 6 Removal of Antibiotics from Water by Adsorption/Biosorption on Adsorbents from Different Raw Materials -- Chapter 7 Biosorption of Copper

saccharomyces cerevisiae: From Biomass Characterization to Process Development -- Chapter 8 Transition Metal-Substituted-Magnetite as an Innovative Adsorbent and Heterogeneous Catalyst for Wastewater Treatment.

Sommario/riassunto

This book provides researchers and graduate students with an overview of the latest developments in and applications of adsorption processes for water treatment and purification. In particular, it covers current topics in connection with the modeling and design of adsorption processes, and the synthesis and application of cost-effective adsorbents for the removal of relevant aquatic pollutants. The book describes recent advances and alternatives to improve the performance and efficacy of this water purification technique. In addition, selected chapters are devoted to discussing the reliable modeling and analysis of adsorption data, which are relevant for real-life applications to industrial effluents and groundwater. Overall, the book equips readers with a general perspective of the potential that adsorption processes hold for the removal of emerging water pollutants. It can readily be adopted as part of special courses on environmental engineering, adsorption and water treatment for upper undergraduate and graduate students. Furthermore, the book offers a valuable resource for researchers in water production control, as well as for practitioners interested in applying adsorption processes to real-world problems in water treatment and related areas.