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Sommario/riassunto

Environmental pollution is a worldwide concern now. A major section of the world population is struggling for drinking water. Polluted soil is resulting into low agricultural productivity and thus creating challenges in the way of sustainable livelihood of a large section of human population. Biological treatment can offer both green solutions for wastewater treatment and resource recovery as well. Like algal-based systems can be utilized for wastewater treatment and production of biofuels from the biomass grown on the wastewater. Bio-based nanomaterials have been extensively studied for their employability in the health care, process optimization, water resource management, dealing with environmental pollutants, biosensors, and many others. Bioprospecting of novel biological agents, bio-based products, and bioresource recovery are paving the way for sustainable development as they are providing local solutions for a number of problems. In this proposed book, we start with the introduction to bio-nanotechnological principles and later on discuss bio-based nanomaterials employability for a diverse range of applications from environment to energy to health care. This book provides with current trends in bio-nanotechnology for anthropogonic purposes, prospects, challenges, and way forward.