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Nota di contenuto	Pharmaceutically Active Compounds in Water Bodies - Occurrence, Fate, and Toxicity -- Techniques for the Detection, Quantifications, and Identification of Pharmaceutically Active Compounds and their Removal Mechanisms -- Removal of Pharmaceutically Active Compounds in Water Bodies - Science history and research hotspots -- Pharmaceutically Active Compounds in Activated Sludge Systems - Presence, Fate, and Removal Efficiency -- Pharmaceutically Active Compounds in Anaerobic Digestion Processes – Biodegradation and Fate -- Microbial Fuel Cells for the Bioelectricity Generation from Effluents Containing Pharmaceutically Active Compounds -- Constructed Wetlands for the Elimination of Pharmaceutically Active Compounds; Fundamentals and Prospects -- Membrane Separation Technologies for the Elimination of Pharmaceutically Active Compounds - Progress and Challenges -- Adsorptive Techniques for the Removal of Pharmaceutically Active Compounds - Materials and Mechanisms -- Homogeneous Advanced OxidationProcesses for the Removal of Pharmaceutically Active Compounds – Current Status and Research

Gaps -- Heterogeneous Advanced Oxidation Processes (HE-AOPs) for the Removal of Pharmaceutically Active Compounds - Pros and Cons.

Sommario/riassunto

This book reports on the treatment of waters and wastewaters with contaminants of emerging concern such as pharmaceutically active compounds. It shows how to prevent the contamination of the environment with such pollutants in the content of effluents. This book reviews various physico-chemical and biological methods that have been developed in order to deal with the polluted effluents. It also evaluates the already developed technologies regarding the sustainability criteria. The chapters discuss technical aspects and put the spotlight on the sustainability aspects of the water and wastewater treatment technologies. .