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Descrizione fisica	1 online resource (100 illus., 50 illus. in color.)
Collana	Handbook of Hydrocarbon and Lipid Microbiology
Disciplina	579
Soggetti	Microbiology Environmental engineering Biotechnology Biochemistry Microbial ecology Applied Microbiology Environmental Engineering/Biotechnology Biochemistry, general Microbial Ecology
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Livello bibliografico	Monografia
Nota di contenuto	Anaeraobic Methane Oxidation in Oceans -- Anaerobic Biodegradation of Steroids -- Anaerobic Degradation of Hydrocarbons: Mechanisms of Hydrocarbon Activation in the Absence of Oxygen -- Anaerobic Methane Oxidation in Freshwater Environments -- Catabolic Pathways and Enzymes Involved in the Anaerobic Degradation of Monocyclic Aromatic Compounds -- Catabolic Pathways and Enzymes Involved in the Anaerobic Degradation of Polycyclic Aromatic Hydrocarbons -- Catabolic Pathways and Enzymes Involved in the Anaerobic Degradation of Short-chain Alkanes and Alkenes -- Catabolic Pathways and Enzymes Involved in the Anaerobic Degradation of Terpenes -- Catabolic Pathways and Enzymes Involved in Anaerobic Methane Oxidation -- Compound Specific Isotope Analysis for Studying the Biological Degradation of Hydrocarbons -- Functional Genomics of Anaerobic Degradation of Hydrocarbons: An Introduction -- Functional

Genomics of Denitrfying Bacteria Degrading Hydrocarbons -- Functional Genomics of Metal-Reducing Microbes Degrading Hydrocarbons -- Functional Genomics of Sulfate Reducing Bacteria Degrading Hydrocarbons -- Functional Genomics of Syntrophic Bacteria Degrading Hydrocarbons -- Functional Marker Gene Analysis for Studying the Diversity of Anaerobic Hydrocarbon Degradation -- Microbial Conversion of Hydrocarbons to Methane in Oil and Coal Reservoirs -- Nucleic Acid Based Isotope Fractionation for Studying Anaerobic Hydrocarbon Degradation -- Protein-based Isotope Fractionation for Studying Anaerobic Hydrcarbon Degradation -- Signature Metabolite Analysis to Determine in situ Anaerobic Hydrocarbon Biodegradation.

Sommario/riassunto

The book uniquely covers all aspects of anaerobic biodegradation of the environmentally important hydrocarbons. The contributions by international experts cover the molecular characterization of unique biocatalysts for oxygen-independent C-H-bond functionalization, the identification of unifying concepts, and the presentation of state-of-the-art methodologies. The current knowledge of the global importance of anaerobic hydrocarbon degradation is highlighted.