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Collana	Handbook of Hydrocarbon and Lipid Microbiology
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Nota di contenuto	Alkane Biosynthesis in Bacteria -- Anaerobic Digestion as Key Technology in the Bio-based Economy -- Contribution of Methane Formation and Methane Oxidation to Methane Emission from Freshwater Systems -- Diversity and Taxonomy of Aliphatic Hydrocarbon Producers -- Diversity and Taxonomy of Methanogens -- Environmental Constraints that Limit Methanogenesis -- Global Scale Consequences of Biological Methane Production -- Hydrogenotrophic Methanogenesis -- Introduction to Microbial Hydrocarbon Production: Bioenergetics -- Metagenomics of Methanogenic Communities in Anaerobic Digesters -- Metagenomics of Methanogenic Communities in Rice Paddy Rhizosphere; the Importance of Methanocella -- Metagenomics of Methanogenic Communities of the Oil Reservoir -- Methanogenesis at High Latitude -- Methanogenesis from Carbon Monoxide -- Methanogenesis in Soils, Wetlands and Peat -- Methanogenesis in the Digestive Tracts of Insects and Other Arthropods -- Methanogens and Methanogenesis in Hypersaline Environments -- Methanogens: Syntrophic Metabolism -- Oiland

Hydrocarbon-producing Bacteria -- Oxic Methane Cycling - New Evidence for Methane Formation in Oxic Lake Water.-.

Sommario/riassunto

The book covers the microbiological, environmental and biotechnological aspects of alkane production. Alkanes are important energy-rich compounds on earth. Microbial synthesis of methane and other alkanes is an essential part of the geochemical cycling of carbon and offers perspectives for our biobased economy. This book discusses different aspects of current knowledge of microbial alkane production. Chapters with state of the art information are written by renowned scientists in the field. The chapters are organised into four themed parts: 1. Biochemistry of Biogenesis - Hydrocarbons 2. Taxonomy, Ecophysiology and Genomics of Biogenesis - Hydrocarbons 3. Biogenic Communities: Members, Functional Roles 4. Global Consequences of Methane Production.