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Titolo	Consequences of Microbial Interactions with Hydrocarbons, Oils, and Lipids: Production of Fuels and Chemicals // edited by Sang Yup Lee
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-50436-3
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (174 illus., 102 illus. in color. eReference.)
Collana	Handbook of Hydrocarbon and Lipid Microbiology
Disciplina	665.501579
Soggetti	Microbiology Industrial microbiology Environmental engineering Biotechnology Bioremediation Biochemistry Microbial ecology Industrial Microbiology Environmental Engineering/Biotechnology Microbial Ecology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Hydrocarbon-lipid Microbiology and Poverty Reduction -- Hydrocarbons from Algae -- Industrial Isoprene Biosynthesis -- Lipid-Containing Secondary Metabolites from Algae -- Metagenomic Mining of Enzyme Diversity -- Microbial Conversion of Carbon Dioxide to Electrofuels -- Microbial Facilitation of Petroleum Recovery: An Introduction -- Microbial Production of Flavours and Fragrances -- Microbial Production of Isoprenoids -- Novel Sensors for Engineering Microbiology -- Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria -- Protein Emulsifiers -- Rediscovering Biopolymers -- Rhamnolipids -- Screening for Enantioselective Enzymes -- Synthetic Biology for Biocatalysis -- Synthetic Biology for Biofuels in <i>Saccharomyces cerevisiae</i> -- Use of Biosurfactants in Oil Recovery -- Using Microorganisms as Prospecting Agents in Oil and

Gas Exploration -- *Yarrowia lipolytica* as a Cell Factory for  
Oleochemical Biotechnology.

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Sommario/riassunto

This book covers the current states of microbial and related technologies that have been developed for the efficient production of chemicals, fuels and materials by integrating strain and enzyme development, fermentation processes, and downstream processes. The book also covers how microbes and microbial products can be employed to facilitate petroleum recovery. Global consequences of bio-based production of chemicals, fuels and materials are also discussed with insights.

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