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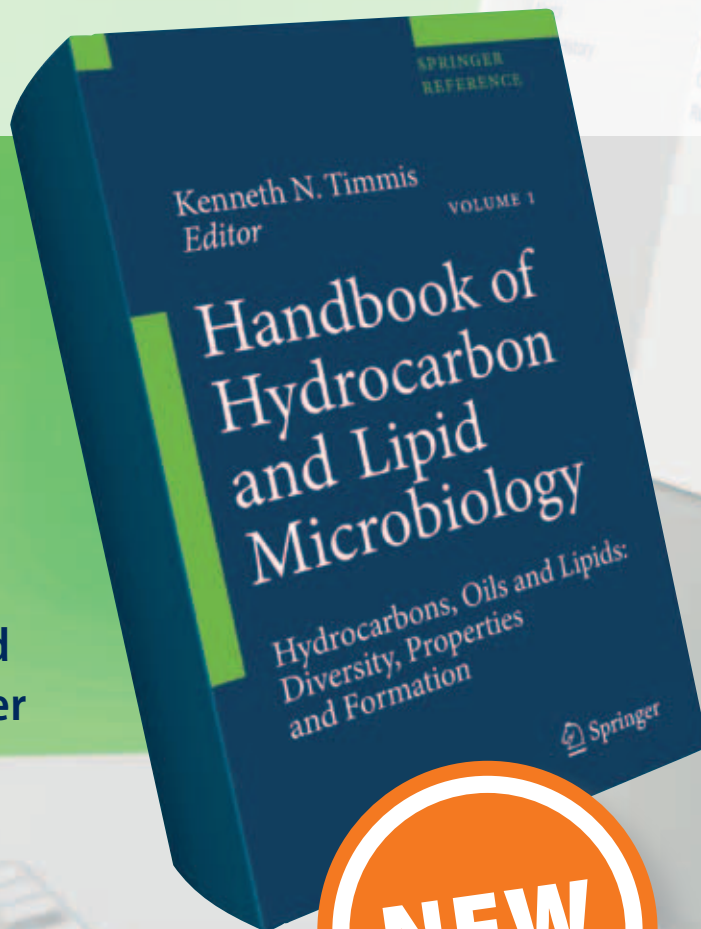
Hydrocarbons, Oils and Lipids: Diversity, Properties and Formation

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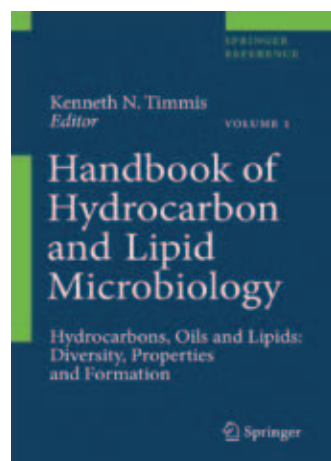
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Handbook of Hydrocarbon and Lipid Microbiology

Hydrocarbons, Oils and Lipids: Diversity, Properties and Formation

Kenneth N. Timmis, Environmental Microbiology Laboratory, Braunschweig, Germany (Ed.)

Section Editors: Terry McGenity, Jan Roelof van der Meer, Victor deLorenzo

“Water is life!” All active cellular systems require water as the medium and solvent of their metabolic activities. Hydrophobic compounds and structures, which tend to exclude water, though providing inter alia excellent sources of energy and a means of biological compartmentalization, present problems of cellular handling, poor bioavailability and, in some cases, toxicity. Microbes both synthesize and exploit a vast range of hydrophobic organics, especially petroleum oil hydrocarbons and industrial pollutants, and the underlying inter-

actions not only have major consequences for the lifestyles of the microbes involved, but also for biogeochemistry, climate change, environmental pollution, human health and a range of biotechnological applications. The aim of this handbook is to be the definitive resource of current knowledge on the diverse and multifaceted aspects of these interactions, the microbial players, and the physiological mechanisms and adaptive strategies characteristic of the microbial lifestyle that plays out at hydrophobic material: aqueous liquid interfaces.

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► ... a timely and comprehensive resource of our current understanding of the interactions of microbes with hydrocarbon compounds. Not only is the current state of knowledge of a diverse range of topics covered, but each chapter highlights critical knowledge gaps in an effort to actively promote new research. ► **Rebecca E. Parales**, University of California, Davis/CA, USA

► ...a work of paramount importance within the field. This Handbook will not only be a reference text, because it gives an overview on the progress made in the last decades, but will also be a reference in the future because it sets up research perspectives in the field. I particularly like the interdisciplinary character of this Handbook that covers a wide variety of topics ranging from the chemistry, geochemistry of hydrocarbon origin to the physiology, microbiology, biochemistry and genetics of microorganisms dealing with these chemicals. The chapters are concise, yet comprehensive and highlight the most important developments...

► **Juan L. Ramos**, CSIC, Granada, Spain

► ... truly essential reading for any researcher in this field. Rarely will a subject area have been covered so comprehensively... ► **Don A. Cowan**, University of the Western Cape, Cape Town, South Africa



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