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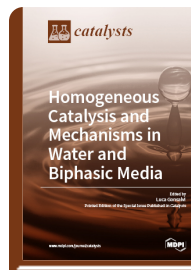
Homogeneous Catalysis and Mechanisms in Water and Biphasic Media

www.mdpi.com/books/reprint/1140

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ISBN 978-3-03897-584-7 (Softback)

ISBN 978-3-03897-585-4 (PDF)



In recent years, water phase chemistry and catalysis has witnessed a renewed interest, also in view of increasing environmental and economical concerns. Novel approaches, materials, and catalysts have been designed, for example, to convey the properties of known transition metal catalysts to their water-soluble analogs, reaching high activities and selectivities. This was possible thanks to new synthetic pathways to molecular catalysts, new mechanistic insights into the role of water as a non-innocent solvent, the use of theoretical methods and advanced engineering techniques, and the application of novel concepts for phase transfer agents in biphasic catalysis.

The book contains three review articles and six research articles, addressing topics related to water phase chemistry and catalysis, ranging from the use of cyclodextrins as mass transfer agents in biphasic catalysis, to water-soluble catalyst design for targeted chemical transformation, to the application of ultrasonic monitoring of biocatalysis in water, covering aspects such as chemical synthesis, various aspects of catalysis, and engineering solutions. The range of topics addressed in this book will stimulate the reader's interest and provide a valuable source of information for researchers in academia and industry.



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