This is the first book in the field to focus on these aspects, providing extremely valuable information unavailable elsewhere for anyone seeking the practical application of microreactor technology in preparative chemistry.

The topics covered branch out in three different directions. To begin with, the knowledge necessary for the preparative chemistry concerning the influence of the so-called microeffects on the reaction procedure and on mass and heat transfer as well as the surface phenomena are provided in detail. Next, practical aspects of the synthesis of various basic chemicals and fine chemicals, polymers, bioproducts and nanoparticles are discussed, including important advice for both the researcher and industrial chemist. Finally, reaction examples in microreactors whose reaction guidance are best understood are given together with universally applicable correlations as well as modeling approaches and transfer potential on related reaction systems.

With its specific instructions, tips and experimental procedures for product syntheses as well as the inclusion of both the technical and theoretical background this is a must-have for beginners and experts alike working in this emerging field.
ABOUT THE AUTHOR

Wladimir Reschetilowski is Director of the Institute of Industrial Chemistry at the University of Technology Dresden, Germany. Having obtained his academic degrees from Technical University Leuna-Merseburg, he began his career working at the Leipzig University, continued it for DECHEMA (Society for Chemical Engineering and Biotechnology, Frankfurt/M.) as the Head of the Department of Technical Chemistry before taking up his present appointment as Full Professor at the University of Technology Dresden. Professor Reschetilowski has authored over 200 scientific publications in the field of acid and bifunctional catalytic conversion of hydrocarbons by microporous and mesoporous solids, asymmetric synthesis on chiral-modified catalyst systems, application of microstructured reactors in preparative chemistry and catalytic conversion of bio-based raw materials into organic base products and fuels. He is awarded with an honorary professorship by St.-Petersburg State University of Technology and is known as the principal author of the compendium 'Academic curriculum of teaching technical chemistry' in German Universities as well as of the teaching book 'Technisch-chemisches Praktikum'. He is also appointed expert of the accreditation agency in engineering, computer sciences, natural sciences and mathematics (ASIIN).

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