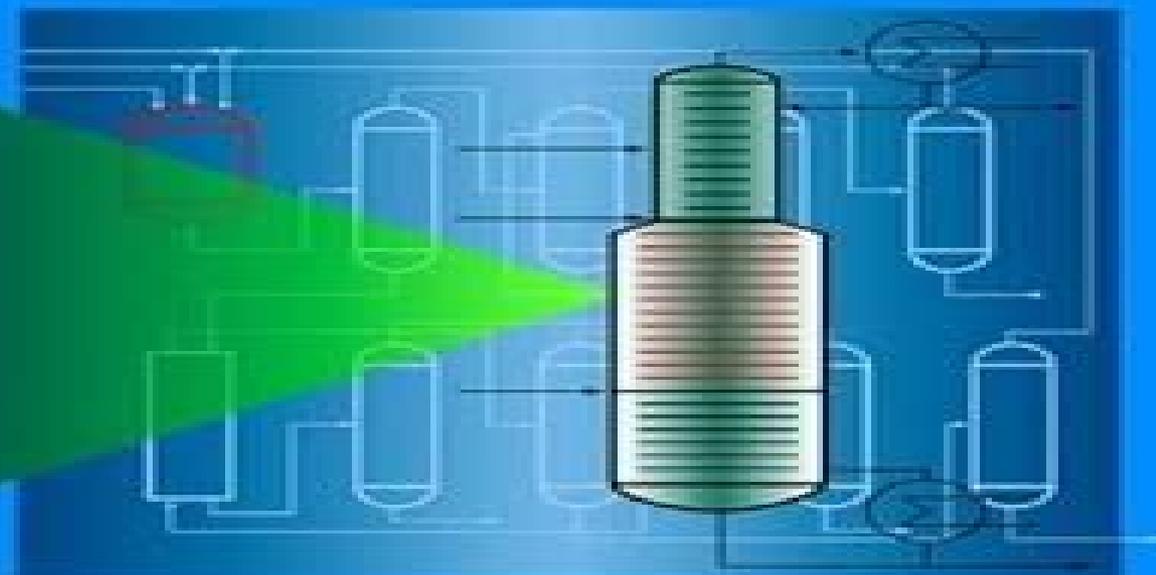


Reactive Distillation

Status and Future Directions

Edited by

Kai Sundmacher and Achim Kienle



Reactive Distillation Status And Future Directions

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Chien, Hao-Yeh Lee, Rene D Elms**

Reactive Distillation Status And Future Directions:

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Separation and Purification Technologies in Biorefineries Shri Ramaswamy, Hua-Jiang Huang, Bandaru V. Ramarao, 2013-02-04 Separation and purification processes play a critical role in biorefineries and their optimal selection design and operation to maximise product yields and improve overall process efficiency Separations and purifications are necessary for upstream processes as well as in maximising and improving product recovery in downstream processes These processes account for a significant fraction of the total capital and operating costs and also are highly energy intensive Consequently a better understanding of separation and purification processes current and possible alternative and novel advanced methods is essential for achieving the overall techno economic feasibility and commercial success of sustainable biorefineries This book presents a

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applying intensified reactor and or separator systems in a range of industries to achieve green chemistry principles

Chemical Engineering Process Simulation Nishanth G. Chemmangattuvalappil, Chien Hwa Chon, Denny Ng Kok Sum, Rafil Elyas, Cheng-Liang Chen, I Lung Chien, Hao-Yeh Lee, Rene D Elms, 2017-07-13 Chemical Engineering Process Simulation is ideal for students early career researchers and practitioners as it guides you through chemical processes and unit operations using the main simulation softwares that are used in the industrial sector This book will help you predict the characteristics of a process using mathematical models and computer aided process simulation tools as well as model and simulate process performance before detailed process design takes place Content coverage includes steady and dynamic simulations the similarities and differences between process simulators an introduction to operating units and convergence tips and tricks You will also learn about the use of simulation for risk studies to enhance process resilience fault finding in abnormal situations and for training operators to control the process in difficult situations This experienced author team combines industry knowledge with effective teaching methods to make an accessible and clear comprehensive guide to process simulation Ideal for students early career researchers and practitioners as it guides you through chemical processes and unit operations using the main simulation softwares that are used in the industrial sector Covers the fundamentals of process simulation theory and advanced applications Includes case studies of various difficulty levels to practice and apply the developed skills Features step by step guides to using UniSim Design PRO II ProMax Aspen HYSYS for process simulation novices Helps readers predict the characteristics of a process using mathematical models and computer aided process simulation tools

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Integrated Chemical Processes Kai Sundmacher,Achim Kienle,Andreas Seidel-Morgenstern,2005-06-17 This is the first book dedicated to the entire field of integrated chemical processes covering process design analysis operation and control of these processes Both the editors

and authors are internationally recognized experts from different fields in industry and academia and their contributions describe all aspects of intelligent integrations of chemical reactions and physical unit operations such as heat exchange separational operations and mechanical unit operations As a unique feature the book also introduces new concepts for treating different integration concepts on a generalized basis Of great value to a broad audience of researchers and engineers from industry and academia

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Books Rose Arny, 2004 **Chemical Micro Process Engineering** Volker Hessel, 2005-04-15 Micro process engineering is approaching both academia and industry With the provision of micro devices systems and whole plants by commercial suppliers one main barrier for using these units has been eliminated This book focuses on processes and their plants rather than on devices what is before behind and around micro device fabrication and gives a comprehensive and detailed overview on the micro reactor plants and three topic class applications which are mixing fuel processing and catalyst screening Thus the book reflects the current level of development from micro reactor design to micro reactor process design

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