

Contents

Volume 1			
Symbols and Units	IX	Pinch Technology	705
Conversion Factors	XI	Combustion	719
Abbreviations	XII	Part 3: Process Development	
Country Codes	XVII	and Intensification	747
Periodic Table of Elements	XVIII	Process Development, 1. Fundamentals	
Part 1: Chemical Reaction Engineering		and Standard Course	749
and Reactor Types	1	Process Development, 2. Evaluation	773
Principles of Chemical Reaction		Process Intensification, 1. Fundamentals	
Engineering	3	and Molecular Level	793
Biochemical Engineering	83	Process Intensification, 2. Phase Level	817
Reaction Engineering in Metallurgical		Process Intensification, 3. Process	
Processing	153	Unit Level	845
Model Reactors and their Design		Process Intensification, 4. Plant Level	869
Equations	179	Part 4: Plant and Process Safety	899
Bubble Columns	227	Plant and Process Safety, 1. Introduction	901
Chromatographic Reactors	249	Plant and Process Safety, 2. Hazardous	
Electrochemical Reactors	277	Materials and Process Conditions	905
Catalytic Fixed-Bed Reactors	305	Plant and Process Safety, 3. Occupational	
Fluidized-Bed Reactors	371	Hazards and Personnel Protection	955
Membrane Reactors	419	Plant and Process Safety, 4. Chemical	
Metallurgical Furnaces	439	Process Safety Regulation	969
Microalgae Reactors	483	Plant and Process Safety, 5. Engineered	
Micro Process Technology,		Safety Measures	983
1. Introduction	495	Plant and Process Safety, 6. Risk Analysis	1011
Micro Process Technology, 2. Processing	507	Plant and Process Safety, 7. Risk	
Microreactors – Modeling and Simulation	571	Calculations	1095
Reactive Distillation	609	Plant and Process Safety, 8. Management	
Stirred Tank Reactors	623	of Safety in the Chemical and	
Thin-Film Reactors	641	Petrochemical Industry	1103
Three-Phase Trickle-Bed Reactors	651	Plant and Process Safety, 9. Risk	
Tubular Reactors	665	Communication	1139
Volume 2		Author Index	1151
Part 2: Energy Management	683	Subject Index	1155
Energy Management in Chemical			
Industry	685		

