
Table of Contents

PART I Batch Processing General Overview

Chapter 1

Introduction3

Ekaterini Korovessi and Andreas A. Linninger

Chapter 2

Batch Processing Industries7

Keith G. Tomazi, Andreas A. Linninger, and James R. Daniel

PART II Batch Processing Design Issues

Chapter 3

Conceptual Design and Synthesis of Batch Processes.....43

Rafiqul Gani and Irene Papaeconomou

Chapter 4

Batch Reactors in the Bioindustries83

John Villadsen

Chapter 5

Batch Distillation107

Ki-Joo Kim and Urmila Diwekar

Chapter 6

Batch Crystallization.....151

Priscilla J. Hill

Chapter 7

Crystallization and Associated Solid–Liquid Separations205

Sean M. Dalziel and Thomas E. Friedmann

Chapter 8	
Pollution Prevention for Batch Pharmaceutical and Specialty Chemical Processes.....	255
<i>Andreas A. Linninger and Andrés Malcolm</i>	

PART III Batch Processing Management

Chapter 9	
Batch Process Modeling and Optimization.....	305
<i>Andreas Cruse, Wolfgang Marquardt, Jan Oldenburg, and Martin Schlegel</i>	

Chapter 10	
Batch Process Management: Planning and Scheduling.....	389
<i>Karl D. Schnelle and Matthew H. Bassett</i>	

Chapter 11	
Monitoring and Control of Batch Processes.....	419
<i>Sten Bay Jørgensen, Dennis Bonné, and Lars Gregersen</i>	

Chapter 12	
Supply-Chain Management.....	463
<i>Nilay Shah and Conor M. McDonald</i>	

PART IV Future of Batch Processing

Chapter 13	
Concluding Remarks and Future Prospects.....	517
<i>Ekaterini Korovessi and Andreas A. Linninger</i>	

Index	525
--------------------	-----