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Titolo	Hydrodynamics of gas-liquid reactors : normal operation and upset conditions // B.J. Azzopardi ... [et al.]
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Altri autori (Persone)	AzzopardiB. J (Barry J.)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	CONTENTS; List of Figures; List of Tables; Preface; Nomenclature; 1. Introduction; PART ONE; 2. Bubble Columns; 2.1 Introduction; 2.2 Types of Bubble Columns; 2.3 Introduction of Gas; 2.3.1 Methodology of Gas Injection; 2.3.2 Bubble Formation and Size Change; 2.3.3 Bubble Movement; 2.3.4 Void Fraction Prediction; 2.3.5 Detailed Behaviour of the Flow; 2.3.6 Gas-Liquid Mass Transfer; 2.3.7 Design of Gas Introduction Arrangement; 2.3.8 Worked Example; 2.4 Disengagement of Liquid from Gas; 2.4.1 Mechanisms of Drop Formation; 2.4.2 Drop Capture; 2.4.3 Wave Plate Mist Eliminators 2.4.4 Mesh Mist Eliminators Questions; References; 3. Sparged Stirred Vessels; 3.1 Introduction; 3.2 Flow Regimes; 3.3 Variations; 3.4 Spargers; 3.5 Impellers; 3.5.1 Disc Turbines; 3.5.2 Pitched Blade

Turbines; 3.5.3 Hydrofoil Impellers; 3.5.4 Multiple Impellers; 3.6 Baffles; 3.7 Power Requirements; 3.7.1 Single Impellers; 3.7.2 Multiple Impellers; 3.7.3 Single-Phase Power; 3.8 Gas Fraction; 3.9 Mass Transfer; 3.9.1 Bubble Size; 3.9.2 Interfacial Area; 3.9.3 Mass Transfer; 3.10 Mixing Times; Questions; References; 4. Thin Film Reactors; 4.1 Introduction; 4.2 Falling Film Reactors
4.2.1 Film Thickness 4.2.2 Interfacial Waves; 4.2.3 Heat and Mass Transfer; 4.3 Rotating Disc Reactors; 4.3.1 Film Thickness; 4.3.2 Interfacial Waves; 4.3.3 Mass Transfer; 4.4 Two-Phase Tubular Reactors; 4.5 Monolith Reactors; 4.5.1 Micro-Channels; 4.5.2 Flow Phenomena in Micro-Channels; 4.5.3 Numerical Modelling; Questions; References; 5. Macroscale Modelling; 5.1 Introduction; 5.2 Eulerian Multiphase Flow Model; 5.2.1 Definition; 5.2.2 Transport Equations; 5.2.3 Interfacial Forces; 5.2.4 Turbulence Models; 5.2.5 Case Study - Cylindrical Bubble Column; 5.2.6 Homogenous and Mixture Modelling
5.3 Poly-Dispersed Flows 5.3.1 Methods of Moments; 5.3.2 Case Study - Hibiki's Bubble Column; 5.4 Gassed Stirred Vessels; 5.4.1 Impeller Model; 5.4.2 Multiple Reference Frame; 5.4.3 Multiple Impellers; 5.5 Summary; Questions; References; 6. Mesoscale Modelling Using the Lattice Boltzmann Method; 6.1 Introduction; 6.2 Lattice Boltzmann Method and the Advantages; 6.3 Numerical Simulation of Single-Phase Flow and Heat Transfer; 6.3.1 LBM Model; 6.3.2 Treatment for a Curved Boundary; 6.3.3 Numerical Simulation and Results; 6.4 Numerical Simulation of Two-Phase Flow
6.4.1 Two-Phase Lattice Boltzmann Model 6.4.2 Vortices Merging in a Two-Phase Spatially Growing Mixing Layer; 6.4.3 Viscous Fingering Phenomena of Immiscible Two-Fluid Displacement; 6.4.4 Bubbles/Drops Flow Behaviour; References; PART TWO; 7. Upset Conditions; 7.1 Introduction; 7.2 Active Relief Methods; 7.3 Passive Relief Methods; References; 8. Behaviour of Vessel Contents and Outflow Calculations; 8.1 Introduction; 8.1.1 Physics of Venting Processes; 8.1.2 Typical Reactions; 8.1.3 Trends and Observations; 8.1.4 Summary of Observations and Measurements of the Level Swell Process
8.2 Modelling of the Level Swell Process

Sommario/riassunto

"The design of chemical reactors and their safety are as critical to the success of a chemical process as the actual chemistry taking place within the reactor. This book provides a comprehensive overview of the practical aspects of multiphase reactor design and operation with an emphasis on safety and clean technology. It considers not only standard operation conditions, but also the problems of runaway reaction conditions and protection against ensuing over-pressure. Hydrodynamics of Multiphase Reactors addresses both practical and theoretical aspects of this topic. Initial chapters discuss various different types of gas/liquid reactors from a practical viewpoint, and later chapters focus on the modelling of multiphase systems and computational methods for reactor design and problem solving. The material is written by experts in their specific fields and will include chapters on the following topics: Multiphase flow, Bubble columns, Sparged stirred vessels, Macroscale modelling, Microscale modelling, Runaway conditions, Behaviour of vessel contents, Choked flow, Measurement techniques"--

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Titolo	A Handbook of Anglo-Saxon Studies
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Collana	Critical Theory Handbooks
Classificazione	233.035 942.01
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Soggetti	Anglo-Saxons Civilization, Anglo-Saxon Great Britain History Anglo-Saxon period, 449-1066
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Nota di contenuto	A Handbook of Anglo-Saxon Studies; Contents; List of Figures; Notes on Contributors; Acknowledgments; Introduction; References; 1 Borders; Translating Meaning; Traces of the Past; Mark My Words; Outer Limits; Crossing into Life; In Medias Res; Notes; References; Primary sources; Secondary sources; 2 Disability; The Body of Evidence; Defining Disability: Methods and Approaches; The Language of

Disability; Disabling Rights; Conclusion; Notes; References; Primary sources; Secondary sources; 3 Gender; Gender and Militancy; The Female Warrior, Past and Present; Finding the Female Body Heroic Bodies in DistressThe Nature of Militancy; Notes; References; Primary sources; Secondary sources and select theoretical texts; 4 Hegemony; Notes; References and Further Reading; Primary source; Secondary sources; 5 Historicism; Notes; References; Primary sources; Secondary sources; 6 Law and Justice; "What Seems Most Just to You"; The Demands of the Text; Notes; References; Primary sources; Secondary sources; 7 Literacy; The Opposite of Literacy; From Writing to Literacy; Observing Literacy: The Grammar of Legibility; Observing Literacy: The Book as the World; Notes; References
8 MasculinityApproaches to Masculinity in Anglo-Saxon England; Manufacturing Swords, Making Men; Possessing Swords, Acquiring Status; Adorning and Protecting Swords; Deposition of Swords and the Re-creation of Masculinity; The Victims of Swords and the Destruction of Masculinity; Conclusions; Notes; References; Primary sources; Secondary sources; 9 Media; What Are Media? Some Definitions Disguised as Maxims; Desiring and Denying Communication: Media in "The Husband's Message"; Notes; References; Primary sources; Secondary sources; 10 Postcolonial; Postcolonial Theory and Anglo-Saxon England
NotesReferences; Primary sources; Secondary sources; 11 Race and Ethnicity; Overview; Race, Language, and Culture; Literary Criticism and Race; Note; References; Primary sources; Secondary sources; 12 Sex and Sexuality; Notes; References; Primary sources; Secondary sources; 13 Space and Place; Space and Romance; The Spaces and Places of Andreas: The Middle World; The Spaces and Places of Andreas: The Lower World; The Spaces and Places of Andreas: The Upper World; Place and the Subject; Notes; References; Primary sources; Secondary sources; 14 Time; Memory and Archive
Permanence and IndividuationMovements of Conversion; Notes; References; Primary sources; Secondary sources; 15 Violence; Introduction; The Disorder/Order Dyad and Sexual Violence; The Exeter Book Riddles and Sexual Violence; Conclusion; Notes; References; Primary sources; Secondary sources; 16 Visual Culture; What Is Visual Culture?; Significance for Anglo-Saxon Studies; References; Primary sources; Secondary sources; 17 Women; Notes; References and Further Reading; Primary sources; Secondary sources; 18 Writing; References; Primary sources; Secondary sources; Index

Sommario/riassunto

Reflecting the profound impact of critical theory on the study of the humanities, this collection of original essays examines the texts and artifacts of the Anglo-Saxon period through key theoretical terms such as 'ethnicity' and 'gender'. Explores the interplay between critical theory and Anglo-Saxon studiesTheoretical framework will appeal to specialist scholars as well as those new to the fieldIncludes an afterword on the value of the dialogue between Anglo-Saxon studies and critical theory
