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Nota di contenuto	1. Principles and Modes of Distillation in Desalination Process -- 2. Thermal Desalination Systems: From Traditionality to Modernity and Development -- 3. Generating Artificial Weather Data Sequences for Solar Distillation Numerical Simulations -- 4. Desalination by Membrane Distillation -- 5. Modeling of Solar-Powered Desalination -- 6. Performance Investigation of the Solar Membrane Distillation Process Using TRNSYS Software -- 7. Reactive Distillation Applied to Biodiesel Production by Esterification: Simulation Studies -- 8. Reactive Distillation Modeling Using Artificial Neural Networks -- 9. Heat Integration of Reactive Divided Wall Distillation Column -- 10. Centralized and Decentralized Control System for Reactive Distillation Diphenyl Carbonate Process.
Sommario/riassunto	Distillation is an important separation technique that has been used for many centuries to exploit the volatility differences between components in a mixture. The distillation process has many variations and applications. This book includes two sections on desalination and reactive distillation. It discusses desalination in the processes of solar and membrane distillation, with a focus on the reduction of energy costs to obtain potable water. It also discusses reactive distillation, which can be used in some cases to reduce the power duty in the

separation process by using the reaction heat directly in the separation. The book includes cases of mathematical modeling, simulation, and optimization of the distillation process.