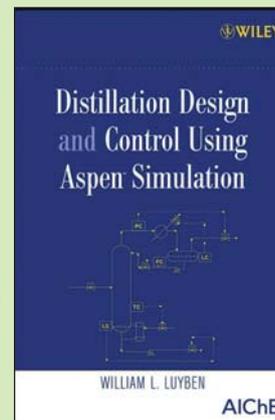


Books

Distillation Design and Control Using Aspen Simulation

William L. Luyben, AIChE and John Wiley & Sons, Inc., New York and Hoboken, NJ, 345 pp., \$94.95, April 2006, ISBN: 0-471-77888-5

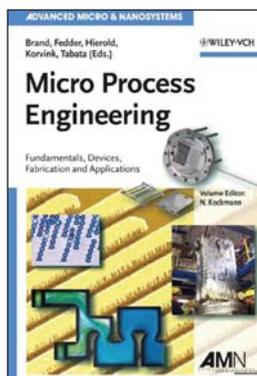
As the world continues to seek new sources of energy, the distillation process remains one of the most important separation methods in the chemical and petroleum industries. And as new renewable sources of energy and chemical feedstocks become more universally utilized, the issues of distillation design and control will remain vital to a future sustainable lifestyle. This book introduces the current status and future implications of this critical technology from the dual perspectives of steady-state design and dynamics. Where traditional design texts have focused mainly on steady-state economic aspects of distillation design, the author also addresses such issues as dynamic performance in the face of disturbances. Using the commercial simulators AspenPlus and AspenDynamics, the text guides future and practicing chemical engineers first in the development of optimal steady-state designs of distillation systems, and then in the development of effective control structures. The text features in depth coverage of the dynamics of column design to help develop effective control structures for distillation columns; development of rigorous simulations of single distillation columns and sequences of columns; and coverage of design and control of petroleum fractionators. Encompassing nearly four decades of research and practical developments in this dynamic field, the text represents an important reference for both students and experienced engineers faced with distillation problems.



Advanced Micro & Nanosystems, Vol. 5, Micro Process Engineering

Volume Editor Norbert Kockmann, Wiley-VCH, Hoboken, NJ, 507 pp., \$250.00, April 2006, ISBN: 3-527-31246-3

This book provides cutting-edge reviews and detailed case studies by top authors from science and industry, covering technologies, devices and advanced systems from the micro and nano worlds, which together have an immense innovative application potential that opens up with control of shape and function from the atomic level right up to the visible world without any technological gaps.



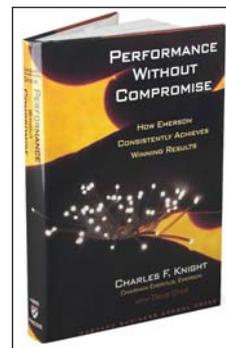
In this topical volume, authors from leading industrial players and research institutions present a concise and didactical introduction to micro process engineering, the combination of microtechnology and process engineering into a most promising and powerful tool for revolutionizing chemical processes and industrial mass production of bulk materials, fine chemicals, pharmaceuticals and many other products.

The book takes the readers from the fundamentals of engineering methods, transport processes, and fluid dynamics to device conception, simulation and modeling, control interfaces and issues of modularity and compatibility. Fabrication strategies and techniques are examined next, focused on the fabrication of suitable microcomponents from various materials such as metals, polymers, silicon, ceramics and glass. The book concludes with actual applications and operational aspects of micro process systems, giving broad coverage to industrial efforts in America, Europe and Asia as well as laboratory equipment and education.

Performance Without Compromise

Charles F. Knight with Davis Dyer, Harvard Business School Publishing, Boston, MA, 304 pp., \$29.95, Sept. 2005, ISBN: 1-59139-777-4

In today's volatile marketplace, it's rare for firms to last — much less consistently increase earnings — for more than four decades. That's what makes the story of 115-yr-old global manufacturing and technology leader Emerson so remarkable, and so valuable, for today's managers. How does Emerson do it? And what can other companies learn from its success?



Celebrated business leader Charles F. Knight — who was CEO of Emerson for 27 of its 43 consecutive years of increased profits — says the secret behind Emerson's long-term competitiveness is a dynamic management process carried out with unrelenting discipline. In "Performance Without Compromise," Knight breaks down the key components of the Emerson management process in detail for the first time, and shows how this core process enables Emerson to address and overcome major challenges ranging from technological discontinuities to intense global competition.

The book describes how Emerson: transformed itself from a technology follower to a global leader; reinvented manufacturing operations for global competitiveness; restructured the company to respond to emerging trends in customer behavior; completed more than 200 acquisitions with an investment of over \$10 billion; launch and cultivate new programs focused on growth opportunities; and maintain an executive turnover rate of less than 4%.