Suggested Texts on Supercritical Fluid Extraction, Reaction, Cleaning and Other Techniques Utilizing Supercritical Fluids

Supercritical Fluid Extraction: Principles and Practice; Mark A. McHugh, Val J. Krukonis

Supercritical fluid extraction is a technique in which carbon dioxide is used under high pressure to separate materials (e.g. removing caffeine from coffee). Separations are basic to all process industries, and supercritical fluid extraction is a specific technique that is receiving a high level of attention. The book combines basic fundamentals with industrial applications. It presents technical analysis of successes and failures of supercritical fluid technology. The second edition contains new material on polymer processing, calculation of phase behavior, and phase behavior of high-pressure mixtures. It has been expanded, updated and includes new chapters on chromatography and food processing. (ISBN #0-750-69244-8)

Supercritical Fluid Extraction; Larry T. Taylor

Supercritical Fluid Extraction provides a clear, practical step-by-step introduction to a sample preparation method that helps laboratories reduce or eliminate the use of halogenated solvents, extract samples more quickly and efficiently, and improve the accuracy of their results. By encouraging a deliberate, systematic approach to supercritical fluid extraction methods and techniques, this book enables the scientist to effectively introduce this technology into everyday laboratory practice.
(ISBN #0-471-11990-3)

Chemical Synthesis Using Supercritical Fluids; Phillip G. Jessop, Walter Leitner

The use of supercritical fluids as a media for chemical synthesis is explored in detail. Experimental techniques and case studies of real-world applications utilizing supercritical fluids as a reaction media are discussed. (ISBN #03-527-29605-0)

Supercritical Fluid Science and Technology; Y. Arai, T. Sako, Y. Takebayashi

Potential of supercritical fluid processing methods are presented in a comprehensive manner. Through the careful discussion of physical and chemical principles, the application of this processing technology is demonstrated. (ISBN #3-540-41248-4)

Natural Extracts Using Supercritical Carbon Dioxide; Mamata Mukhopadhyay

A collection of research from a wide variety of sources. This work offers a convenient guide to a clean, inexpensive, and non-toxic solvent that performs better than most conventional solvents. The text reviews recent developments in supercritical fluid technology and its applications to the food, flavor, fragrance, and pharmaceuticals industries. It outlines the many advantages supercritical fluid techniques have over traditional extraction methods like steam distillation, solvent extraction, and molecular distillation. (ISBN #0-849-30819-4)

Gas Extraction: An Introduction to the Fundamentals of Supercritical Fluids and Application to Separation Processes; G. Brunner

Application of compressed gases as solvents has found widespread interest within the scientific community. Many of these processes have industrial applications. The text deals with the possibilities for supercritical gases as solvents for separation processes. The volume combines physicochemical aspects with chemical engineering methods. Most of the experimental examples and case studies provide new results that will be helpful for practicing scientists, engineers, and students who want to make use of the techniques. (ISBN #3-798-50944-1)

Fundamentals of Supercritical Fluids; Tony Clifford, Anthony Clifford

Provides a clear and uncluttered account of the basic physical principles underlying the use of supercritical fluids. Covers basic topics such as phase behavior, thermodynamic properties, and diffusion. (ISBN #0-198-50137-4)

Supercritical Fluids: Extraction and Pollution Prevention (ACS Symposium Series, No. 670); Martin A. Abraham, Aydin Kemal Sunol

Applications of supercritical fluid extractions include recovery of natural products and environmental and industrial cleanup. This text provides extensive coverage of diverse applications. Each section contains an overview followed by detailed treatments of specific topics including, thermodynamics, chromatography, and mass transfer. (ISBN #0-841-23517-1)

Supercritical Fluid Cleaning: Fundamentals, Technology and Applications (Materials Science and Process Technology Series); John McHardy, Samual P. Sawan

The use of supercritical fluids for cleaning applications is explored through discussions of the supercritical region, solubilities of contaminate materials, designing cleaning processes, dynamics of particle removal, surfactants and microemulsions. The text has several detailed case studies on the use of supercritical fluids as a cleaning solvent. (ISBN #0-815-51416-6)