

## Book review

### ***“Encyclopedic handbook of emulsion technology”***,

Johan Sjöglom (Editor), Marcel Dekker, New York; 2001,  
736 pp.; \$188.50; ISBN: 0-8247- 0454-1

Johan Sjöblom, the editor of this book, has once again succeeded in compiling an exhaustive reference in the field of emulsion technology. In its 30 chapters written by 70 renown specialists this book provides a complete and thorough examination of all topics affecting emulsions performance, discussing fundamental characteristics, theories, and applications for liquid-liquid colloidal dispersions.

The Encyclopedic Handbook of Emulsion Technology can be roughly divided into four sections. Chapters 1–5 review the more general aspects of emulsions. These include fundamental properties and elements of the water/oil interface and the chemical administration of emulsion processes, the use of phase diagrams for determining the stability, preparation, and behaviour of emulsions, all aspects of emulsion stability, and the emulsion concept from the perspective of micro-emulsions.

The following 11 chapters highlight diverse measurement techniques as applied to different kinds of emulsified systems. The instrumental methods described here comprise dielectric, acoustic, and electroacoustic spectroscopy, ultrasonic techniques, rheology, NMR, micro-calorimetry, and video-enhanced microscopy. The authors give an comprehensive introduction to the theoretical background of each method and then present several recent applications.

Chapter 12 dealing with double emulsions for controlled-release applications is located between the second and the third section of this book. It seems to be a little bit exotic in

the context of this volume because it is not directly linked to the contents of the adjoining chapters. However, this underlines the encyclopaedic concept of the book.

The eight chapters of the subsequent section are related in that they contain an in-depth discussions of crude-oil emulsions covering environmental factors, crude oil surfactants and surfactant film properties, molecular and destabilization processes, and extraheavy crude oils.

The fourth section (Chapters 26–29) reviews the hydrodynamics of emulsified systems such as Gibbs surface elasticity, droplet behaviour, and the kinetics of coagulation, flocculation, and coalescence.

The final chapter on asphaltene-stabilized emulsions is again related to crude-oil based emulsions.

The volume includes illustrative tables, figures, equations, and approx. 3000 (!) bibliographic citations with the latest references being from 1999. A six-page index allows to retrieve rapidly the information hidden in this book. Although many chapters of this book deal with crude-oil emulsions, the target audience of this book is wide spread and includes physical, surface, colloid, organic, polymer, medicinal, analytical, food, and cosmetic chemists, biochemists, chemical and environmental engineers, rheologists, physicists, and upper-level undergraduate and graduate students in these disciplines. I am sure that the international community in emulsions science and technology will highly appreciate this volume.

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