1. Record Nr. UNINA9911020156303321

Autore	Tadros Th. F
Titolo	Applied surfactants : principles and applications / / Tharwat F. Tadros
Pubbl/distr/stampa	Weinheim ; ; [Great Britain], : Wiley-VCH, c2005
ISBN	9786610519828 9781280519826 1280519827 9783527604814 3527604812 9783527604531 3527604537
Descrizione fisica	1 online resource (656 p.)
Disciplina	668.1
Soggetti	Surface active agents Chemistry, Technical
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Applied Surfactants; Contents; Preface; 1 Introduction; 1.1 General Classification of Surface Active Agents; 1.2 Anionic Surfactants; 1.2.1 Carboxylates; 1.2.2 Sulphates; 1.2.3 Sulphonates; 1.2.4 Phosphate-containing Anionic Surfactants; 1.3 Cationic Surfactants; 1.4 Amphoteric (Zwitterionic) Surfactants; 1.5 Nonionic Surfactants; 1.5.1 Alcohol Ethoxylates; 1.5.2 Alkyl Phenol Ethoxylates; 1.5.3 Fatty Acid Ethoxylates; 1.5.4 Sorbitan Esters and Their Ethoxylated Derivatives (Spans and Tweens); 1.5.5 Ethoxylated Fats and Oils; 1.5.6 Amine Ethoxylates 1.5.7 Ethylene Oxide-Propylene Oxide Co-polymers (EO/PO)1.5.8 Surfactants Derived from Mono- and Polysaccharides; 1.6 Speciality Surfactants - Fluorocarbon and Silicone Surfactants; 1.7 Polymeric Surfactants; 1.8 Toxicological and Environmental Aspects of Surfactants; 1.8.1 Dermatological Aspects; 1.8.2 Aquatic Toxicity; 1.8.3 Biodegradability; References; 2 Physical Chemistry of Surfactant Solutions; 2.1 Properties of Solutions of Surface Active Agents; 2.2 Solubility-Temperature Relationship for Surfactants; 2.3

Thermodynamics of Micellization; 2.3.1 Kinetic Aspects
2.3.2 Equilibrium Aspects: Thermodynamics of Micellization2.3.3 Phase Separation Model; 2.3.4 Mass Action Model; 2.3.5 Enthalpy and Entropy of Micellization; 2.3.6 Driving Force for Micelle Formation; 2.3.7 Micellization in Other Polar Solvents; 2.3.8 Micellization in Non-Polar Solvents; 2.4 Micellization in Surfactant Mixtures (Mixed Micelles); 2.4.1 Surfactant Mixtures with no Net Interaction; 2.4.2 Surfactant Mixtures with a Net Interaction; 2.5 Surfactant-Polymer Interaction; 2.5.1 Factors Influencing the Association Between Surfactant and Polymer; 2.5.2 Interaction Models
2.5.3 Driving Force for Surfactant-Polymer Interaction2.5.4 Structure of Surfactant-Polymer Complexes; 2.5.5 Surfactant-Hydrophobically Modified Polymer Interaction; 2.5.6 Interaction Between Surfactants and Polymers with Opposite Charge (Surfactant-Polyelectrolyte Interaction); References; 3 Phase Behavior of Surfactant Systems; 3.1 Solubility-Temperature Relationship for Ionic Surfactants; 3.2 Surfactant Self-Assembly; 3.3 Structure of Liquid Crystalline Phases; 3.3.1 Hexagonal Phase; 3.3.2 Micellar Cubic Phase; 3.3.3 Lamellar Phase; 3.3.4 Bicontinuous Cubic Phases
3.3.5 Reversed Structures3.4 Experimental Studies of the Phase Behaviour of Surfactants; 3.5 Phase Diagrams of Ionic Surfactants; 3.6 Phase Diagrams of Nonionic Surfactants; References; 4 Adsorption of Surfactants at the Air/Liquid and Liquid/Liquid Interfaces; 4.1 Introduction; 4.2 Adsorption of Surfactants; 4.2.1 Gibbs Adsorption Isotherm; 4.2.2 Equation of State Approach; 4.3 Interfacial Tension Measurements; 4.3.1 Wilhelmy Plate Method; 4.3.2 Pendent Drop Method; 4.3.3 Du Nouy's Ring Method; 4.3.4 Drop Volume (Weight) Method; 4.3.5 Spinning Drop Method; References
5 Adsorption of Surfactants and Polymeric Surfactants at the Solid/Liquid Interface

Sommario/riassunto

While currently available titles either focus on the basics or on very specific subtopics, this text meets the need for a comprehensive survey of surfactants and their properties, with a strong emphasis on applications and their correlation to the fundamentals.The author covers their classification, physical properties, phase behavior, adsorption, effects - such as wetting, spreading and adhesion - as well as industrial applications in personal care and cosmetics, pharmaceuticals, agrochemicals and food products.Professor Tadros is a well-known expert on the topic of surfactants, with

2. Record Nr. UNINA9910965330103321

Titolo	Nanoscale science : activities for grades 6-12 / / M. Gail Jones ... [et al.]
Pubbl/distr/stampa	Arlington, VA, : NSTA Press, c2007
ISBN	1-281-75820-5 9786611758202 1-933531-75-4
Edizione	[1st ed.]
Descrizione fisica	1 online resource (171 p.)
Altri autori (Persone)	JonesM. Gail <1955->
Disciplina	620/.5
Soggetti	Nanoscience Nanostructures Nanotechnology Science - Study and teaching (Secondary) - Activity programs Technology - Study and teaching (Higher) - Activity programs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 149-151) and index.
Nota di contenuto	Size and scale -- That's huge! -- One in a billion -- Nano shapes -- Biological nanomachines -- Tools and techniques -- What's in your bag? -- Nanomagnets -- Scanning probe microscopy -- Unique properties and behaviors -- It's a small world after all -- Biomimicry -- How nature builds itself -- Physics changes with scale -- Shrinking cups-- Limits to size -- Nanotechnology applications -- Nanomaterials -- Nanotech, Inc. -- Nanomedicine -- Building small -- Societal implications -- Too little privacy -- Promise or peril -- Appendix.
Sommario/riassunto	Futurists predict that nanotechnology will be the next major scientific revolution-one with an even greater impact than the Industrial Revolution. Nanoscale Science will help your middle and high school students understand the big implications of tiny technology. Using guided inquiry with open-ended exploration where possible, the book's 20 investigations teach students about the unique properties and behavior of materials at the nanoscale-one-billionth of the size of a meter.