1. Record Nr. UNICAMPANIAVAN00124622

Titolo	Coupled Mathematical Models for Physical and Biological Nanoscale Systems and Their Applications : Banff International Research Station, Banff, Canada, 28 August - 2 September 2016 / Luis L. Bonilla, Efthimios Kaxiras, Roderick Melnik editors
Pubbl/distr/stampa	Cham, : Springer, 2018
Titolo uniforme	Coupled Mathematical Models for Physical and Biological Nanoscale Systems and Their Applications
Descrizione fisica	x, 314 p. : ill. ; 24 cm
Soggetti	78A70 - Biological applications of optics and electromagnetic theory [MSC 2020] 82Cxx - Time-dependent statistical mechanics (dynamic and nonequilibrium) [MSC 2020] 82Dxx - Applications of statistical mechanics to specific types of physical systems [MSC 2020] 92Bxx - Mathematical biology in general [MSC 2020] 92Cxx - Physiological, cellular and medical topics [MSC 2020] 97Mxx - Education of mathematical modeling and applications of mathematics [MSC 2020]
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910677174503321

Autore	Tadros Th. F
Titolo	Colloids in agrochemicals / / Tharwat F. Tadros
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2009
ISBN	9786613370402 9781283370400 1283370409 9783527631162 352763116X 9783527631155 3527631151
Descrizione fisica	1 online resource (302 p.)
Collana	Colloids and interface science series ; ; v. 5
Disciplina	668.6
Soggetti	Agricultural chemicals Colloids - Industrial applications
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	Colloids in Agrochemicals; Dedication; Contents; Preface; 1 General Introduction; Further Reading; 2 General Classification of Surface-active Agents Used in Agrochemical Formulations; 2.1 Anionic Surfactants; 2.1.1 Carboxylates; 2.1.2 Sulfates; 2.1.3 Sulfonates; 2.1.4 Phosphate-containing Anionic Surfactants; 2.2 Cationic Surfactants; 2.3 Amphoteric (Zwitterionic) Surfactants; 2.4 Nonionic Surfactants; 2.4.1 Alcohol Ethoxylates; 2.4.2 Alkylphenol Ethoxylates; 2.4.3 Fatty Acid Ethoxylates; 2.4.4 Sorbitan Esters and Their Ethoxylated Derivatives (Spans and Tweens) 2.4.5 Ethoxylated Fats and Oils2.4.6 Amine Ethoxylates; 2.4.7 Surfactants Derived from Mono- and Polysaccharides; 2.5 Speciality Surfactants - Fluorocarbon and Silicone Surfactants; 2.6 Polymeric Surfactants; 2.6.1 Ethylene Oxide-Propylene Oxide Copolymers (EO/PO); References; 3 Physical Chemistry of Surfactant Solutions; 3.1 Properties of Solutions of Surfactants; 3.2 Solubility-Temperature Relationship for Surfactants; 3.3 Thermodynamics of Micellization; 3.3.1 Kinetic Aspects; 3.3.2 Equilibrium Aspects: Thermodynamics of

Micellization; 3.3.3 Phase Separation Model; 3.3.4 Mass Action Model
3.3.5 Enthalpy and Entropy of Micellization3.3.6 Driving Force for Micelle Formation; 3.4 Micellization in Surfactant Mixtures (Mixed Micelles); 3.4.1 Surfactant Mixtures with No Net Interaction; 3.4.2 Surfactant Mixtures with a Net Interaction; 3.5 Surfactant-Polymer Interaction; 3.5.1 Factors Influencing the Association Between Surfactant and Polymer; 3.5.2 Driving Force for Surfactant-Polymer Interaction; 3.5.3 Structure of Surfactant-Polymer Complexes; 3.5.4 Surfactant-Hydrophobically Modified Polymer Interaction; References; 4 Interfacial Aspects of Agrochemical Formulations
4.1 Introduction4.2 Equilibrium Adsorption of Surfactants at the Air/Liquid and Liquid/Liquid Interfaces; 4.3 The Gibbs Adsorption Isotherm; 4.4 Dynamic Processes of Adsorption; 4.4.1 General Theory of Adsorption Kinetics; 4.4.2 Adsorption Kinetics from Micellar Solutions; 4.4.3 Experimental Techniques for Studying Adsorption Kinetics; 4.4.3.1 The Drop Volume Technique; 4.4.3.2 Maximum Bubble Pressure Technique; 4.5 Adsorption of Surfactants and Polymeric Surfactants at the Solid/Liquid Interface; 4.6 Surfactant Adsorption; 4.6.1 Adsorption of Ionic Surfactants on Hydrophobic Surfaces
4.6.2 Adsorption of Ionic Surfactants on Polar Surfaces4.6.3 Adsorption of Nonionic Surfactants; 4.7 Adsorption of Polymeric Surfactants at the Solid/Liquid Interface; 4.8 Experimental Methods for Measurement of Adsorption Parameters for Polymeric Surfactants; 4.8.1 Amount of Polymer Adsorbed, - The Adsorption Isotherms; 4.8.2 Polymer-bound Fraction p; 4.8.3 Adsorbed Layer Thickness and Segment Density Distribution p(z); 4.8.4 Hydrodynamic Thickness Determination; References
5 Interaction Forces Between Particles or Droplets in Agrochemical Dispersions (Suspension Concentrates or Emulsions, EWs) and Their Role in Colloid Stability

Sommario/riassunto

The first modern approach to relate fundamental research to the applied science of colloids, this series bridges academic research and industrial applications, thus providing the information vital to both. Written by the very best scientists in their respective disciplines, the five volumes are edited by an internationally recognized expert on this topic.This volume describes the role of colloids in agrochemicals, highlighting the importance of fundamental research in practical applications.Of interest to electrochemists, physical and surface chemists, materials scientists, and physici