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Nota di contenuto	Formulation of Disperse Systems; Contents; Preface; Chapter 1 General Introduction; 1.1 Suspensions; 1.2 Latexes; 1.3 Emulsions; 1.4 Suspoemulsions; 1.5 Multiple Emulsions; 1.6 Nanosuspensions; 1.7 Nanoemulsions; 1.8 Microemulsions; 1.9 Pigment and Ink Dispersions; 1.10 Foams; References; Chapter 2 Surfactants Used in Formulation of Dispersions; 2.1 General Classification of Surface-Active Agents; 2.1.1 Anionic Surfactants; 2.1.1.1 Carboxylates; 2.1.1.2 Sulphates; 2.1.1.3 Sulphonates; 2.1.1.4 Phosphate-Containing Anionic Surfactants; 2.1.2 Cationic Surfactants 2.1.3 Amphoteric (Zwitterionic) Surfactants 2.1.4 Nonionic Surfactants; 2.1.4.1 Alcohol Ethoxylates; 2.1.4.2 Alkyl Phenol Ethoxylates; 2.1.4.3 Fatty Acid Ethoxylates; 2.1.4.4 Sorbitan Esters and Their Ethoxylated Derivatives (Spans and Tweens); 2.1.4.5 Ethoxylated Fats and Oils; 2.1.4.6 Amine Ethoxylates; 2.1.4.7 Amine Oxides; 2.1.5 Specialty Surfactants; 2.1.5.1 Fluorocarbon and Silicone Surfactants; 2.1.5.2 Gemini Surfactants; 2.1.5.3 Surfactants Derived from Monosaccharides and Polysaccharides; References; Chapter 3 Physical Chemistry of Surfactant Solutions and the Process of Micellisation

3.1 Thermodynamics of Micellisation  
3.1.1 Kinetic Aspects; 3.1.2 Equilibrium Aspects: Thermodynamics of Micellisation; 3.2 Enthalpy and Entropy of Micellisation; 3.2.1 Driving Force for Micelle Formation; 3.2.2 Micellisation in Surfactant Mixtures (Mixed Micelles); References; Chapter 4 Dispersants and Polymeric Surfactants; 4.1 Solution Properties of Polymeric Surfactants; 4.2 General Classification of Polymeric Surfactants; 4.3 Polyelectrolytes; References; Chapter 5 Adsorption of Surfactants at the Air/Liquid, Liquid/Liquid, and Solid/Liquid Interfaces; 5.1 Introduction  
5.2 Adsorption of Surfactants at the Air/Liquid (A/L) and Liquid/Liquid (L/L) Interfaces  
5.3 The Gibbs Adsorption Isotherm; 5.4 Equation of State Approach; 5.5 The Langmuir, Szyszkowski, and Frumkin Equations; 5.6 Interfacial Tension Measurements; 5.6.1 The Wilhelmy Plate Method; 5.6.2 The Pendant Drop Method; 5.6.3 The Du Nouy's Ring Method; 5.6.4 The Drop Volume (Weight) Method; 5.6.5 The Spinning Drop Method; 5.7 Adsorption of Surfactants at the Solid/Liquid (S/L) Interface; 5.7.1 Adsorption of Ionic Surfactants on Hydrophobic Surfaces  
5.7.2 Adsorption of Ionic Surfactants on Polar Surfaces  
5.7.3 Adsorption of Nonionic Surfactants; References; Chapter 6 Adsorption of Polymeric Surfactants at the Solid/Liquid Interface; 6.1 Theories of Polymer Adsorption; 6.2 Experimental Techniques for Studying Polymeric Surfactant Adsorption; 6.2.1 Measurement of the Adsorption Isotherm; 6.2.2 Measurement of the Fraction of Segments,  $p$ ; 6.3 Determination of Segment Density Distribution ( $z$ ) and Adsorbed Layer Thickness  $h$ ; 6.4 Examples of the Adsorption Isotherms of Nonionic Polymeric Surfactants; 6.4.1 Adsorbed Layer Thickness Results  
6.4.2 Kinetics of Polymer Adsorption

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### Sommario/riassunto

This book presents comprehensively the science and technology behind the formulation of disperse systems like emulsions, suspensions, foams and others. Starting with a general introduction, the book covers a broad range of topics like the role of different classes of surfactants, stability of disperse systems, formulation of different dispersions, evaluation of formulations and many more. Many examples are included, too. Written by the experienced author and editor Tharwat Tadros, this book is indispensable for every scientist working in the field.

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