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Nota di contenuto	Front Cover; Dedication; Contents; Preface; Acknowledgments; Editor; Contributors; Chapter 1: One Hundred Years of Micelles : Evolution of the Theory of Micellization; Chapter 2: Ionic Surfactants and Ion-Specific Effects : Adsorption, Micellization, and Thin Liquid Films; Chapter 3: Wettability of Solid-Supported Lipid Layers; Chapter 4: Surfactant Adsorption Layers at Liquid Interfaces; Chapter 5: Wetting and Spreading by Aqueous Surfactant Solutions; Chapter 6: Wetting Instabilities in Langmuir-Blodgett Film Deposition Chapter 7: Interfacial Studies of Coffee-Based Beverages : From Flavor Perception to Biofuels Chapter 8: DNA Release from Cross-Linked DNA Gels and DNA Gel Particles; Chapter 9: Advances in Poly(amino acid)s-Based Amphiphilic Graft Polymers and Their Biomedical Applications; Chapter 10: Polymeric Surfactants and Some of Their Applications; Chapter 11: Biosurfactants; Chapter 12: Microbially Derived Biosurfactants : Sources, Design, and Structure- Property Relationships; Chapter 13: Triggered Drug Release Using Lyotropic Liquid Crystals as Delivery Vehicles

Chapter 14: Pharmaceutical Microemulsions and Drug Delivery; Chapter 15: Hydrotropes : Structure and Function; Chapter 16: Surfactant Ionic Liquids : Potential Structured Reaction Media?; Chapter 17: Stimuli-Responsive Surfactants : History and Applications; Chapter 18: Progress in Over a Century of Designing Emulsion Properties : Emerging Phenomenological Guidelines from Generalized Formulation and Prospects to Transmute the Knowledge into Know-How; Chapter 19: An Overview of Surfactants in Enhanced Oil Recovery; Chapter 20: Soil Removal by Surfactants during Cleaning Processes; Back Cover

Sommario/riassunto

A celebration was held at the 18th Surfactants in Solution (SIS) meeting in November 2010 in Melbourne in honor of Kashmiri Mittal's 100th edited book. Those who participated in the symposium are leaders in the fields of surfactant-based, physical, organic, and materials chemistries, and many agreed to contribute a chapter to this book. Some chapters are contributed by others who wanted to participate in the meeting but were unable to attend. The authors were asked to give an overview of their research area and to include sections on past, present, and future directions. The authors updated and revised their manuscripts as needed in 2012. The cumulative result is a broad perspective on the current developments in and future of surfactant science and technology. The next SIS will be held in Coimbra, Portugal, in June 2014, the 20th biennial meeting over about two score years. During this time, the field of surfactant chemistry has expanded dramatically and has evolved considerably, aided by the development of modern instrumentation and new experimental techniques that permit exploration of surfactant properties in both the bulk and at molecular levels and by simulation. The physical properties of surface-active agents, commonly known as surfactants, amphiphiles, detergents, or soaps, are governed by covalently bonding two opposite chemical properties in one molecule: a water-insoluble hydrophobic tail, typically composed of linear hydrocarbon chemically bonded to polar or ionic headgroup and counterion. These surfactant monomers or unimers self-assemble into a plethora of aggregate structures such as micelles, microemulsions, vesicles, and emulsions depending on solution composition, but they also form surfactant monolayers at the air, liquid, and solid interface--
