
Contents

Preface.....	xvii
Acknowledgments.....	xxi
Editor	xxiii
Contributors	xxv

PART I Theory of Self-Assembly and Ion-Specific Effects

Chapter 1 One Hundred Years of Micelles: Evolution of the Theory of Micellization.....	3
<i>Ramanathan Nagarajan</i>	
Chapter 2 Ionic Surfactants and Ion-Specific Effects: Adsorption, Micellization, and Thin Liquid Films	53
<i>Radomir I. Slavchov, Stoyan I. Karakashev, and Ivan B. Ivanov</i>	

PART II Surfactants at Solid–Liquid Interfaces

Chapter 3 Wettability of Solid-Supported Lipid Layers	121
<i>Emil Chibowski, Małgorzata Jurak, and Lucyna Holysz</i>	
Chapter 4 Surfactant Adsorption Layers at Liquid Interfaces	149
<i>Reinhard Miller, Valentin B. Fainerman, Vincent Pradines, Volodymyr I. Kovalchuk, Nina M. Kovalchuk, Eugene V. Aksenenko, Libero Liggieri, Francesca Ravera, Giuseppe Loglio, Altynay Sharipova, Yuri Vysotsky, Dieter Vollhardt, Nenad Masic, Rainer Wüstneck, Jürgen Krägel, and Aliyar Javadi</i>	
Chapter 5 Wetting and Spreading by Aqueous Surfactant Solutions	171
<i>Natalia Ivanova and Victor M. Starov</i>	
Chapter 6 Wetting Instabilities in Langmuir–Blodgett Film Deposition	193
<i>Volodymyr I. Kovalchuk, Emily K. Zholkovskiy, Mykola P. Bondarenko, and Dieter Vollhardt</i>	
Chapter 7 Interfacial Studies of Coffee-Based Beverages: From Flavor Perception to Biofuels	213
<i>Michele Ferrari, Francesca Ravera, Libero Liggieri, and Luciano Navarini</i>	

PART III *Polymeric Surfactants and Polymer/Surfactant Mixtures*

Chapter 8	DNA Release from Cross-Linked DNA Gels and DNA Gel Particles	233
	<i>M. Carmen Morán, Diana Costa, Maria da Graça Miguel, and Björn Lindman</i>	
Chapter 9	Advances in Poly(amino acid)s-Based Amphiphilic Graft Polymers and Their Biomedical Applications	251
	<i>Chan Woo Park, Hee-Man Yang, Se Rim Yoon, and Jong-Duk Kim</i>	
Chapter 10	Polymeric Surfactants and Some of Their Applications.....	273
	<i>Tharwat Tadros</i>	

PART IV *Biosurfactants*

Chapter 11	Biosurfactants.....	299
	<i>Girma Biresaw</i>	
Chapter 12	Microbially Derived Biosurfactants: Sources, Design, and Structure-Property Relationships	333
	<i>Ponisseril Somasundaran, Partha Patra, John D. Albino, and Indumathi M. Nambi</i>	

PART V *Formulation and Application of Surfactant Aggregates*

Chapter 13	Triggered Drug Release Using Lyotropic Liquid Crystals as Delivery Vehicles.....	347
	<i>Dima Libster, Abraham Aserin, and Nissim Garti</i>	
Chapter 14	Pharmaceutical Microemulsions and Drug Delivery.....	377
	<i>Maung Win, Paul Lang, Manu Vashishtha, and Dinesh O. Shah</i>	
Chapter 15	Hydrotropes: Structure and Function	399
	<i>Krister Holmberg</i>	
Chapter 16	Surfactant Ionic Liquids: Potential Structured Reaction Media?.....	409
	<i>Paul Brown, Craig Butts, and Julian Eastoe</i>	
Chapter 17	Stimuli-Responsive Surfactants: History and Applications	429
	<i>John Texter</i>	

PART VI Formulation and Application of Emulsions

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	459
<i>Jean-Louis Salager, Ana Forgiarini, and Johnny Bullón</i>	
Chapter 19 An Overview of Surfactants in Enhanced Oil Recovery	489
<i>Paulina M. Mwangi and Dandina N. Rao</i>	
Chapter 20 Soil Removal by Surfactants during Cleaning Processes	507
<i>Clarence A. Miller</i>	
Index	533