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Surfactants in Tribology, 2 Volume Set
Versatile, Biodegradable Surfactants for the Agricultural Industry
Novel Alkyl Polyglucoside Surfactant Derivatives for Improving the Infiltration of Irrigation Water Into Repellent Soil
Handbook of Detergents, Part F
Nonionic Surfactants
Handbook for cleaning/decontamination of surfaces
The Continued Evolution of Agrochemicals : 24th Volume
Pesticide Formulations and Application Systems
Physical Chemistry
Handbook of Detergents, Part E
Synthesis, Properties, and Applications
Pesticide Formulations and Delivery Systems
Sugar-Based Surfactants
Nonionic Surfactants
Alkyl Polyglycosides

OCONNOR SKYLAR

Surfactants from Renewable Resources CRC Press
Annotation Papers presented at the Twelfth ASTM Symposium on [title], held in San Diego, California, October 1991. The volume is divided into four sections: novel surfactants and their properties (four papers); pesticide formulation technologies (14 papers); pesticide packaging and management (one paper: Container Design and "Glug"); and pesticide application technologies (eight papers). Annotation copyright by Book News, Inc., Portland, OR.
Surface Chemistry of Surfactants and Polymers John Wiley & Sons
The on-going ‘green’ trend in the personal care industry coupled with global environmental concerns, place natural-origin, biodegradable and skin-friendly surfactants such as alkyl polyglucosides (APGs) in high demand. After successful use in cosmetics, sufficient data has been obtained to welcome some sugar emulsifiers into the field of drug dosage. Alkyl Polyglucosides presents a comprehensive compendium which guides a researcher from the APG-related preformulation stages to formulation processing, including the investigation of various APG-stabilized systems skin performance. This book introduces various APG representatives, their benefits in relation to certain conventional surfactants, physicochemical and interfacial properties, possible interaction with commonly used ingredients and diverse characterization techniques indispensable for the assessment of colloidal systems. The first chapter introduces alkyl polyglucosides, followed by chapters on their properties, behaviour, an overview of the patent protection mechanisms and guidelines for submitting patent applications. Finally, a conclusion surveys international patent applications involving APGs. Introduces the field of alkyl polyglucoside emulsifiers, listing all the contemporary and newly synthesized APG emulsifiers Provides detailed information on various aspects of APG-based structures Reveals potential of APG-stabilized vehicles as prospective delivery

systems using several model drugs and cosmetic actives Includes an up-to-date review of research conducted in the field of APGs, facilitating future preformulation and formulation studies for researchers Offers a concise and practical compendium of characterization techniques

Nonionic Surfactants John Wiley & Sons
The focus of Handbook for Cleaning/Decontamination of Surfaces lies on cleaning and decontamination of surfaces and solid matter, hard as well as soft. Bringing together in a 2-volume reference source: - current knowledge of the physico-chemical fundamentals underlying the cleaning process; - the different needs for cleaning and how these needs are met by various types of cleaning processes and cleaning agents, including novel approaches; - how to test that cleaning has taken place and to what extent; - the effects of cleaning on the environment; - future trends in cleaning and decontamination, for example the idea of changing surfaces, to hinder the absorbance of dirt and thus make cleaning easier. A brief introduction is given to the legal demands concerning the environment and a historical background, in terms of development of detergents, from soaps to the modern sophisticated formulations. Bactericides, their use and the environmental demands on them are covered. Thorough discussions of mechanisms for cleaning are given in several chapters, both general basic concepts and special cases like particle cleaning and cleaning using microemulsion concepts. * General understanding of how cleaning works, function of ingredients and formulations * Overview of environmental issues and demands from the society in the area * Gives basic formulas for cleaning preparations in most areas

Principles, Applications, and Limitations Trans Tech Publications Ltd
Holberg (materials and surface chemistry, Chalmers U. of Technology, Sweden) presents updated versions of the first edition's eleven chapters and includes six new chapters, mostly dealing with the concept of natural surfactants. Each chapter deals with a particular class of surfactant and is present.

Novel Surfactants CRC Press
This is an easily-accessible two-volume encyclopedia summarizing all the articles in the main volumes Kirk-Othmer Encyclopedia of Chemical Technology, Fifth Edition organized alphabetically. Written by prominent scholars from industry, academia, and research institutions, the Encyclopedia presents a wide scope of articles on chemical substances, properties, manufacturing, and uses; on industrial processes, unit operations in chemical engineering; and on fundamentals and scientific subjects related to the field.

Handbook Of Detergents, Part C Amer Chemical Society
"Volume 4 of the Encyclopedia of Emulsion Technology completes this unique and compact 4-volume work by extending the discussion of basic theory and applications featured in Volumes 1-3. More importantly, this volume presents the latest developments on new applications in emulsion technology--introducing scientists and engineers to the most recent concepts. "

Cationic Surfactants CRC Press
The papers of this 4 volumes set on "Progress in Environmental Protection and Processing of Resource" are grouped as follows: Chapter 1: Environmental Materials, Chemistry, Biology Technology and Progress; Chapter 2: Environmental Safety and Health; Chapter 3: Environmental Planning and Assessment; Chapter 4: Environmental Analysis, Modelling and Monitoring Chapter 5: Environmental Restoration Engineering, Treatment and Removal Technologies and Processes; Chapter 6: Environmental Pollution; Chapter 7: Waste Disposal and Recycling; Chapter 8: Hydrology and Water Resources, Management Applications; Chapter 9: Sound, Noise and Vibration Control, Seismic Applications; Chapter 10: Soil and Water Conservation and Desertification Control; Chapter 11: Eco-Environmental Protection and Environmental Management; Chapter 12: Plant Protection, Forest Cultivation and Conservation; Chapter 13: Geographic Information and Remote Sensing Science; Chapter 14: Land Resources Environment, Urban Planning and Applications; Chapter 15: Mineral Prospecting and Geological Exploration; Chapter 16: Mining Engineering and Coal Mining; Chapter 17: Mineral Process Engineering; Chapter 18: Oil and Gas Well Development Projects, Methan Fields Applications.

Kirk-Othmer Concise Encyclopedia of Chemical Technology, 2 Volume Set Elsevier
"This book represents the work that was presented at the 23rd Symposium on Pesticide Formulations and Application Systems, Oct. 15 & 16, 2002 in Norfolk, VA. The ASTM E35.22 Subcommittee sponsors this symposium annually in an attempt to deliver pertinent and updated information to agrochemical formulators. The work of several authors from private industry, government and academia is well represented here in an overview of recent pesticide technology."

Proceedings of the 4th World Conference on Detergents CRC Press
In spite of the apparent simplicity of silica’s composition and structure, scientists are still investigating fundamental questions regarding the formation, constitution, and behavior of colloidal silica systems. Colloidal Silica: Fundamentals and Applications introduces new information on colloid science related to silica chemistry as well as theoretical and experimental aspects of significant areas of colloidal silica science and technology. This resource is dedicated to helping researchers find new uses of silica and answers to practical problems as its industrial use continues to grow steadily in traditional and novel areas. Written by leading silica scientists around the world, this book reflects developments in the field since silica scientist Ralph K. Iler published his authoritative book on silica chemistry in 1979. It discusses properties and methods of characterization, synthesis, and preparation of silica in terms of industrial applications. Following an analysis of the surface chemistry of various silicas, the book explores methods for measuring particle size and useful characterization techniques for determining structure, stability, and reactivity. The authors then focus on various studies, analytical methods, and current applications involving silica gels and powders, silica coatings, colloidal silica, and sol-gel technology. Colloidal Silica: Fundamentals and Applications features up-to-date material relating to fields as diverse as catalysis, metallurgy, electronics, glass, ceramics, paper and pulp technology, optics, elastomers, food, health care, and industrial chromatography. It is ideal for scientists interested in silica chemistry and physics as well as those not familiar with the subject.

Alkyl Polyglucosides John Wiley & Sons
An Examination of Detergent Applications The fifth volume in a six volume project penned by detergent industry experts, this segment deals with the various applications of detergent formulations – surfactants, builders, sequestering/chelating agents – as well as other components. These applications are discussed with respect to the scope of their domestic, institutional, or industrial usages. Special focus is given to technological advancement, health and environmental concerns, and the rapid changes occurring in the field within the past several years. With each chapter providing the special access of a

pioneering researcher, this text offers an insider’s look at the most current advances.
Nonionic SurfactantsAlkyl Polyglucosides Alkyl polyglycosides, a new class of nonionic surfactants, meet the challenges of the agricultural industry by being biodegradable and effective. Their physical properties make them superior surfactants for many applications in a wide range of conditions. Alkyl polyglycosides have excellent aqueous solubility and are stable in the presence of high levels of electrolytes. In addition, they are non-gelling and insensitive to temperature changes due to the lack of a cloud point. These unique solubility properties coupled with their compatibility with anionic, cationic and other nonionic surfactants, make it easy to formulate concentrated or dilute products. Alkyl polyglycoside surfactants are environmentally safe and have excellent toxicity and biodegradability profiles. Alkyl polyglycoside surfactants offer the agricultural industry a new biodegradable raw material with a broad range of properties and advantages.
ScholarlyBrief John Wiley & Sons
Biobased Surfactants: Synthesis, Properties, and Applications, Second Edition, covers biosurfactant synthesis and applications and demonstrates how to reduce manufacturing and purification costs, impurities, and by-products. Fully updated, this book covers surfactants in biomedical applications, detergents, personal care, food, pharmaceuticals, cosmetics, and nanotechnology. It reflects on the latest developments in biobased surfactant science and provides case scenarios to guide readers in efficient and effective biobased surfactant application, along with strategies for research into new applications. This book is written from a biorefinery-based perspective by an international team of experts and acts as a key text for researchers and practitioners involved in the synthesis, utilization, and development of biobased surfactants. Describes new and emerging biobased surfactants and their synthesis and development Showcases an interdisciplinary approach to the topic, featuring applications to chemistry, biotechnology, biomedicine, and other areas Presents the entire lifecycle of biobased surfactants in detail
Molecular Self-assembly and Interactions in Solutions of Membrane Proteins and Surfactants ScholarlyEditions
Most modern surfactants are readily biodegradable and exhibit low toxicity in the aquatic environment, the two criteria for green surfactants. However the majority are synthesised from petroleum, so over the past decade the detergent industry has turned its attention to developing greener routes to create these surfactants via renewable building blocks. Surfactants from Renewable Resources presents the latest research and commercial applications in the emerging field of sustainable surfactant chemistry, with emphasis on production technology, surface chemical properties, biodegradability, ecotoxicity, market trends, economic viability and life-cycle analysis. Reviewing traditional sources for renewable surfactants as well as recent advances, this text focuses on techniques with potential for large scale application. Topics covered include: Renewable hydrophobes from natural fatty acids and forest industry by-products Renewable hydrophiles from carbohydrates, amino acids and lactic acid New ways of making renewable building blocks; ethylene from renewable resources and complex mixtures from waste biomass
Biosurfactants Surface active polymers This book is a valuable resource for industrial researchers in companies that produce and use surfactants, as well as academic researchers in surface and polymer chemistry, sustainable chemistry and chemical engineering.
Fundamentals and Applications ASTM International
Soil water repellency causes several agronomic challenges for turfgrass managers, such as reduced color, quality, and playability of golf courses and sports fields. Surfactants are commonly applied as water and soil treatments in order to manage water conservation, irrigation efficiency, and overall plant health. There is an ongoing need within the current sustainability initiatives for advanced materials with superior environmental and performance profiles. This research is the first to demonstrate the efficacy of anionic alkyl polyglucoside esters (AGEs) and AGE-nonionic surfactant blends in increasing the wettability of naturally derived and artificially repellent mineral soils. Surfactant compositions were diluted in distilled water to concentrations ranging from 8000 mg l-1 to 500 mg l-1. A standardized water droplet penetration test was used to measure infiltration times into soils of varying degrees of repellency. AGEs were up to 10 times more effective than alternative surfactants at improving water movement into soil. Performance differences became more significant as the application rates decreased. Our results demonstrate that AGEs can be highly effective at delivering irrigation water and aqueous compositions into the root zone of turfgrass when applied alone and/or in concert with traditional wetting agent classes. Patent applications have been submitted for this discovery.
Chemistry and Technology of Surfactants John Wiley & Sons
The first comprehensive survey on the uses of alkyl polyglycosides as renewable ressources for the chemical industry. Experts from industry show in detail how alkyl polyglycosides can help chemists to improve their products. Since quite a few years, renewable Ressources are of increasing interest for the chemical industry. Alkyl polyglycosides are among the frequently used substances produces from renewable ressorces. Their science as well as technological applications are described in this book competently and with a focus on industrial use.
Alkyl Polyglucosides CRC Press
These proceedings document a conference that has become the forum not only for the dissemination of new technical developments, reviews of markets and consumer habits across the globe, but also for communicating "policy" by the major players in the industry.
Biodegradation Elsevier
Consolidates the many different chemistries being employed to provide environmentally acceptable products through the upstream oil and gas industry This book discusses the development and application of green chemistry in the oil and gas exploration and production industry over the last 25 years — bringing together the various chemistries that are utilised for creating suitable environmental products. Written by a highly respected consultant to the oil and gas industry — it introduces readers to the principles and development of green chemistry in general, and the regulatory framework specific to the oil and gas sector in the North Sea area and elsewhere in the world. It also explores economic drivers pertaining to the application of green chemistry in the sector. Topics covered in Oilfield Chemistry and its Environmental Impact include polymer chemistry, surfactants and amphiphiles, phosphorus chemistry, inorganic salts, low molecular weight organics, silicon chemistry and green solvents. It also looks at sustainability in an extractive industry, examining the approaches used and the other methodologies that could be applied in the development of better chemistries, along with discussions about where the application of green chemistry is leading in this industry sector. Provides the reader with a ready source of reference when considering what chemistries are

appropriate for application to oilfield problems and looking for green chemistry solutions Brings together the pertinent regulations which workers in the field will find useful, alongside the chemistries which meet the regulatory requirements Written by a well-known specialist with a combined knowledge of chemistry, manufacturing procedures and environmental issues Oilfield Chemistry and its Environmental Impact is an excellent book for oil and gas industry professionals as well as scientists, academic researchers, students and policy makers.

Progress in Environmental Protection and Processing of Resource The American Oil Chemists Society

Surfactants are vital components in biological systems, are key ingredients in many formulated products and play an important role in many industrial processes. The property which makes surfactants so useful is their ability to stabilize complex colloidal and interfacial systems. It is not surprising therefore that many new surfactant materials are developed, many of which have novel properties. However because their potential is not fully appreciated they remain underutilized by industry. The main purpose of this book is to illustrate the utility of a range of novel surfactants, in particular those which have been found useful in specific areas and which seem to offer promise across a wider range of applications. The contributors are drawn from industry and academic research and provide a comprehensive account of the preparation, properties and applications of these specialist surfactants. Research chemists in industry and academia will find this book a concise and authoritative account of this important group of surfactants.

Applications John Wiley & Sons

Membrane proteins are amphiphilic proteins that are associated with biological membranes. They regulate critical functions between the cells and their surroundings, yet the relationship between structure and functionality for most of these proteins is still elusive. Integral membrane proteins often span the entire bilayers, and they are characterized by a hydrophobic domain that rests in the membrane and hydrophilic regions on either side of the membrane. These proteins are removed from their native membranes for purification and characterization, and surfactants are typically used to solubilize the hydrophobic portion of the molecule. Unfortunately, membrane proteins often exhibit poor stability when solubilized in surfactant solutions and they are very difficult to crystallize. The goal of this dissertation is to contribute to the understanding of how the self-assembly of surfactants in solution affects the stability of solubilized membrane proteins.

Oilfield Chemistry and its Environmental Impact John Wiley & Sons

A solid introduction to the field of surfactant science, this new edition provides updated information about surfactant uses, structures, and preparation, as well as seven new chapters expanding on technology applications. Offers a comprehensive introduction and reference of the science and technology of surface active materials Elaborates, more fully than prior editions, aspects of surfactant crystal structure as well as their effects on applications Adds more information on new classes and applications of natural surfactants in light of environmental consequences of surfactant use