Until now colloid science books have either been theoretical, or focused on specific types of dispersion, or on specific applications. This then is the first book to provide an integrated introduction to the nature, formation and occurrence, stability, propagation, and uses of the most common types of colloidal dispersion in the process-related industries.

The primary focus is on the applications of the principles, paying attention to practical processes and problems. This is done both as part of the treatment of the fundamentals, where appropriate, and also in the separate sections devoted to specific kinds of industries. Throughout, the treatment is integrated, with the principles of colloid and interface science common to each dispersion type presented for each major physical property class, followed by separate treatments of features unique to emulsions, foams, or suspensions.

The first half of the book introduces the fundamental principles, introducing readers to suspension formation and stability, characterization, and flow properties, emphasizing practical aspects throughout. The following chapters discuss a wide range of industrial applications and examples, serving to emphasize the different methodologies that have been successfully applied.

Overall, the book shows how to approach making emulsions, foams, and suspensions with different useful properties, how to propagate them, and how to prevent their formation or destabilize them if necessary.

The author assumes no prior knowledge of colloid chemistry and, with its glossary of key terms, complete cross-referencing and indexing, this is a must-have for graduate and professional scientists and engineers who may encounter or use emulsions, foams, or suspensions, or combinations thereof, whether in process design, industrial production, or in related R&D fields.
Dr. Schramm has held five executive positions with progressively increasing levels of responsibility in the past six years, including President and CEO of the Saskatchewan Research Council (SRC), Vice President of ARC, and President and CEO of PRI. He has over 25 years of R&D experience in colloid, interface, and petroleum science, has received major national awards for his research, and is best known for his basic and applied research involving petroleum industry applications of suspensions, emulsions, foams, and surfactants. He has substantial R&D management experience, remains an active full Adjunct Professor, and has taught academic and industrial courses in his field, both domestically and internationally. He holds 17 patents, has published seven books, over 300 other scientific publications and proprietary reports, and has given over 100 national and international, plenary, invited, and other scientific presentations. Many of his inventions have been adopted into commercial practice.

For additional product details, please visit https://www.wiley.com/en-us