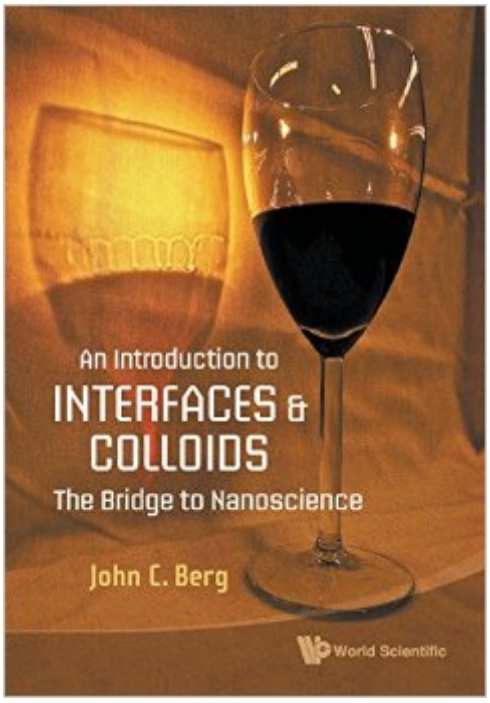
An Introduction To Interfaces And Colloids: The Bridge To Nanoscience



Synopsis

The brings readers with no prior knowledge or experience in interfacial phenomena, colloid science or nanoscience to the point where they can comfortably enter the current scientific and technical literature in the area. Designed as a pedagogical tool, this book recognizes the cross-disciplinary nature of the subject. To facilitate learning, the topics are developed from the beginning with ample cross-referencing. The understanding of concepts is enhanced by clear descriptions of experiments and provisions of figures and illustrations.

Book Information

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Customer Reviews

I have taken two interface and colloids courses (one with Professor Berg), and am currently a professor at Duke in the area of chemistry and nanomaterials. Dr. Berg’s book, resulting from decades of diverse experience performing research and teaching in the field, is an exquisitely clear introduction to interfaces, colloids, and their central role in nanoscience and everyday life. I have reviewed many books in the area of nanoscience and colloids, this is by far the best, it has no peer. Further, as an "expert" I find it the most comprehensive reference for information on the topic. Dr. Berg manages to describe things in a way students can intuitively understand, but he also derives the equations necessary for quantitative prediction of complex phenomena. After taking his course several years ago, I find myself often referring to his book when I want to refresh my knowledge in an area, or learn something new (before it was published this year he sold it to students for his class - I have treasured this book and have often told him he should publish it). The "fun things to do" at the end of each chapter are indeed fun, but also extremely simple and illustrative experiments one

can show a class, or do oneself, to further enhance one’s understanding of how molecular-level interactions control the world around us. No complicated materials are needed - want to measure the thickness of the water-air interface? All you need is a laser pointer and a piece of paper. Ever wonder why you can fill a cup of water over the brim? Why cleaning products work better than water? Berg will give you the complete molecular-level understanding, no matter what your background.