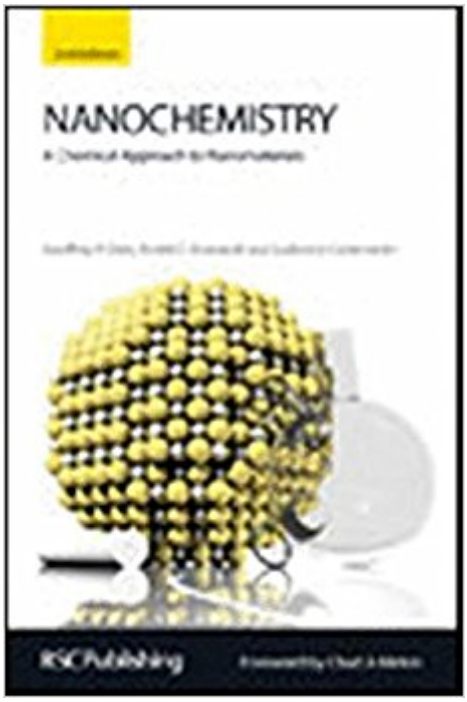
Nanochemistry: A Chemical Approach To Nanomaterials



Synopsis

International interest in nanoscience research has flourished in recent years, as it becomes an integral part in the development of future technologies. The diverse, interdisciplinary nature of nanoscience means effective communication between disciplines is pivotal in the successful utilization of the science. Nanochemistry: A Chemical Approach to Nanomaterials is the first textbook for teaching nanochemistry and adopts an interdisciplinary and comprehensive approach to the subject. It presents a basic chemical strategy for making nanomaterials and describes some of the principles of materials self-assembly over 'all' scales. It demonstrates how nanometre and micrometre scale building blocks (with a wide range of shapes, compositions and surface functionalities) can be coerced through chemistry to organize spontaneously into unprecedented structures, which can serve as tailored functional materials. Suggestions of new ways to tackle research problems and speculations on how to think about assembling the future of nanotechnology are given. Primarily designed for teaching, this book will appeal to graduate and advanced undergraduate students. It is well illustrated with graphical representations of the structure and form of nanomaterials and contains problem sets as well as other pedagogical features such as further reading, case studies and a comprehensive bibliography.

Book Information

Hardcover: 876 pages

Publisher: Royal Society of Chemistry; 2 edition (January 8, 2009)

Language: English

ISBN-10: 184755895X

ISBN-13: 978-1847558954

Product Dimensions: 6.1 x 1.9 x 9.2 inches

Shipping Weight: 3 pounds (View shipping rates and policies)

Average Customer Review: 4.4 out of 5 stars 5 customer reviews

Best Sellers Rank: #128,176 in Books (See Top 100 in Books) #11 inÃ Â Books > Science & Math > Technology > Nanotechnology #12 inÃ Â Books > Science & Math > Chemistry > Industrial & Technical #24 inÃ Â Books > Science & Math > Physics > Nanostructures

Customer Reviews

I have used your Nanochemistry book as my textbook for agraduate level ChE course introducing material self-assembly. Studentsliked the topic and the book a lot. I followed your book and the courseevaluation is excellent (4.8/5.0). I will teach the same class inSpring'08 semester and will use

the same book as the textbook. Thanks forproviding such a great book for the society. - Peng JiangExcellent features of the book make it a useful, practical tool for teachers of materials chemistry, to this reviewer’s joy.As materials chemistry spreads through every domain of modern chemical research and into all sectors of the industry, chemistry practitioners would do well to find the time to read this seminal book.An invaluable reference book for undergraduate and graduate students. As a superb textbook for teaching of materials chemistry and nanotechnology.A gem in the scientific literature...a beautifully written and richly illustrated book that is unlike any other.Ozin and Arsenault should be congratulated for their groundbreaking book. Reading it will reward students in chemistry and materials science as well as researchers from many different disciplines.Nanochemistry will be an invaluable reference book for undergraduate and graduate students looking for an easy way to educate themselves with the up-to-date advances made in chemical patterning, self-assembly, and nanomaterial synthesis....a superb textbook....to this wonderful book written....insightful perspective on nanochemistry.Strongly recommend this book (only 39.95 for a hardcover copy!) to every student and researcher on materials chemistry, physics, materials science, engineering and biology.The book succeeds in its goal of presenting concepts useful to create functional solid-state nanostructures that will likely be helpful for applications in several fields of modern science such as electronics, photonics, batteries, solar cells, fuel cells, and chemical storage and release."A text that covers all the basic concepts of nanoscale chemistry and materials science, and sets them in their historical context, has been long overdue. But here it is - not just a comprehensive guide to the field, but a recipe book for the future. Nanoengineers, start here!"Well-written and informative introductions to all aspects of the field that have a major chemistry component.This book can be highly recommended to develop and accompany courses for chemistry studentsThis book is well worth buying. It is a kaleidoscopic compendium of the achievements of chemists working with materials scientists and physicists.

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It’s a good book for what it is - an airy and almost jocular introduction to nanochemistry. Unfortunately, or to be more accurate, typically, since it is a textbook there is a paucity of practical information. If you need more than a cursory examination of one of the book’s subjects, you will have to hunt down a referenced paper (which has a high probability of being behind a paywall) and sift through an obtuse methods section written by a researcher who either has a fundamentally poor understanding of the material or is deliberately concealing key concepts to prevent a premature prior art revelation on the advice of their institution’s IP attorney. While breezily written and easy to read, this book solidly contributes to a condemnation of the nickle-and-dime-you-to-death mentality of academic science. So, good job! FÃƒÂ©licitations and j’accuse all in one. Well done, sirs, well done.

This book is a great text for those wanting to discover more from new technology. Nanochemistry: A Chemical Approach is ideal for the University students studying topics that include, Materials Chemistry or Medicinal Chemistry. The impact on society of nano materials and the health areas associated with this technology is all wrapped into this book also.Dr. R.Crosdale

More complex than "Concepts of Nanochemistry"Great book about chemistry as a tool in nanoscience...I use it to teach nanotechnology in Chemical Faculty.

Great reference book!

=) pretty cool

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