

Nanotechnology: A Gentle Introduction to the Next Big Idea

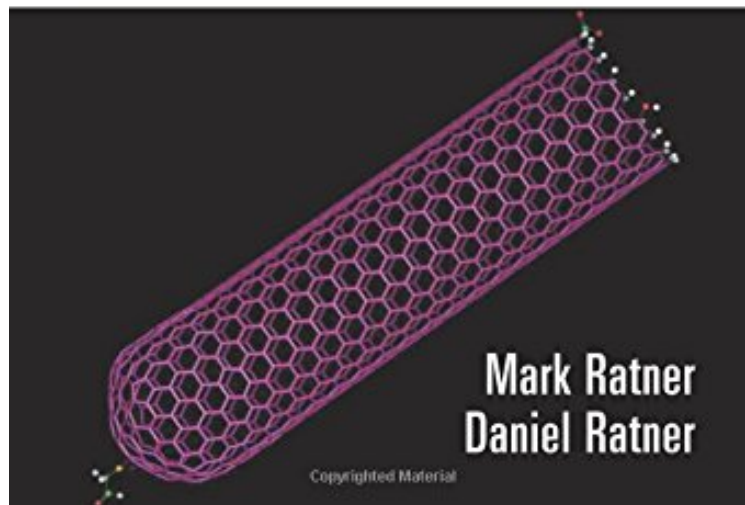
Mark A. Ratner, Daniel Ratner

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Nanotechnology

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#463267 in Books 2002-11-18 2002-11-08 Original language: English PDF # 1 8.90 x .50 x 6.001, .70 #File Name: 0131014005208 pages | File size: 58.Mb

Mark A. Ratner, Daniel Ratner : Nanotechnology: A Gentle Introduction to the Next Big Idea before purchasing it in order to gage whether or not it would be worth my time, and all praised Nanotechnology: A Gentle Introduction to the Next Big Idea:

3 of 3 people found the following review helpful. Just what it sounds like...By G. Harris This book explains some of what Nanotechnology is and is not going to be. What some of the current problems are, and the hoped for results from this research. Investors interested in Nanotechnology as more than a mere buzzword should take note of this book, and apply some of what has been said to the companies chosen to invest in (it provides few company names though, do your own research!). All around, it's a good beginning book and primer for investors. 0 of 0 people found the following

review helpful. Five StarsBy aaron s bullockgood read0 of 0 people found the following review helpful. Great SellerBy Pied PiperIt's not so much the product, but the seller. The product is exactly as they advertised, I've gotten surprises in the past, but not with this one. I got it in no time and no hassles.

In *Nanotechnology: A Gentle Introduction to the Next Big Idea*, nanotech pioneer Mark Ratner and tech entrepreneur Daniel Ratner show how nanotech works, what's new, what's next, and why nanotech may be the next \$1 trillion industry. They survey every area of RD: nanobots, quantum and DNA computing, nanosensors, biostructures, neuro-electronic interfaces, molecular motors, and much more. Simple, brief, and nearly math-free, this is the perfect briefing on nanotech technology and business for every non-technical reader.

From the Back CoverNanotech for everyone! The friendly, non-technical guide to the next industrial revolution. Discover the world's next \$1 trillion industry! The easy-to-understand guide to nanoscale technology, science, business, and ethics Today's hottest nanotech research and tomorrow's hottest applications Nanobots, quantum and DNA computing, nanosensors, neuro-electronic interfaces, and much more Insider's assessment of the nanotechnology marketplace and investment opportunities By 2015, nanotechnology could be a \$1 trillion industry. Now, renowned nanotech pioneer Mark Ratner and technology entrepreneur Daniel Ratner show you how nanotech works, why it's so exciting, what's new, and what's next. They survey the entire fieldtechnology and businesscovering nanobots, molecular electronics, quantum computing, biostructures, nanotubes, molecular motors, nanosensors, and many other breakthrough applications. They provide easy-to-understand explanations of every key concept, plus dozens of visuals that bring nanotechnology to life. Coverage includes: A simple, brief, almost math-free introduction to nanotech science "Grand tour" of nanotech RD, from "smart materials" to DNA computing Breakthrough biomedical applications, including neuro-electronic interfaces and new drug delivery systems Current and emerging nanotech systems for optoelectronics and communications Nanotech here and now: nano-enhanced tennis balls, suntan lotions, and other products already in the market A realistic assessment of nanotech investment opportunities for the short- and long-term Ethical issues associated with nanotech research and product development About the AuthorMARK RATNER, winner of the 2001 Feynman Prize in Nanotechnology, is Charles E. and Emma H. Morrison Professor in Chemistry at Northwestern University. He is widely credited as the "father of molecular-scale electronics"thanks to his groundbreaking work with Ari Aviram that first envisioned how electronic circuit elements might be constructed from single molecules and how these circuits might behave. Ratner is a member of both the American Academy of Arts and Sciences and the National Academy of Sciences. He lectures worldwide on nanotechnology and its implications. DANIEL RATNER, an engineer and tech entrepreneur, has founded two successful technology startup companies, serves as industry advisor to several other high-tech ventures, and was recently awarded the prestigious "30 Under 30" entrepreneurs' award by Philly Tech magazine. Excerpt. Reprinted by permission. All rights reserved.This book has a straightforward aimto acquaint you with the wholeidea of nanoscience and nanotechnology. This comprises the fabricationand understanding of matter at the ultimate scale at whichnature designs: the molecular scale. Nanoscience occurs at the intersectionof traditional science and engineering, quantum mechanics,and the most basic processes of life itself. Nanotechnology encompasseshow we harness our knowledge of nanoscience to create materials,machines, and devices that will fundamentally change the waywe live and work.Nanoscience and nanotechnology are two of the hottest fields inscience, business, and the news today. This book is intended to helpyou understand both of them. It should require the investment ofabout six hoursa slow Sunday afternoon or an airplane trip fromBoston to Los Angeles. Along the way, we hope that you will enjoythis introductory tour of nanoscience and nanotechnology and whatthey might mean for our economy and for our lives.The first two chapters are devoted to the big idea of nanoscienceand nanotechnology, to definitions, and to promises. Chapters 3 and4 discuss the science necessary to understand nanotechnology; youcan skip these if you remember some of your high school science andmathematics. Chapter 5 is a quick grand tour of some of the thematicareas of nanotechnology, via visits to laboratories. Chapters 6 to 9are the heart of the book. They deal with the topical areas in whichnanoscience and nanotechnology are concentrated: smart materials, sensors, biological structures, electronics, and optics. Chapters 10 and11 discuss business applications and the relationship of nanotechnologyto individuals in the society. The book ends with lists of sourcesof additional information about nanotechnology, venture capitalistswho have expressed interest in nanotechnology, and a glossary of keynanotechnology terms. If you want to discuss nanotechnology or findlinks to more resources, you can also visit the bookUs Web site atnanotechbook.We enjoyed the writing and hope you enjoy the read.