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Engines Of Creation: The Coming Era Of Nanotechnology (Anchor Library Of Science)





Synopsis

This brilliant work heralds the new age of nanotechnology, which will give us thorough and inexpensive control of the structure of matter. Â Drexler examines the enormous implications of these developments for medicine, the economy, and the environment, and makes astounding yet well-founded projections for the future.

Book Information

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Customer Reviews

If you were to ask the world's greatest authorities on modern technology to select the five most influential books written thus far on that subject, Engines of Creation would probably be on most (if not all) lists. In it, Drexler analyzes "the coming era of nanotechnology." Obviously, that era has (since 1986) arrived. Nonetheless, Drexler's observations remain both valid and instructive. The book is organized as Part One: The Foundations of Foresight, Part Two: Profiles of the Possible, and Part Three: Dangers and Hopes. In certain respects, Engines of Creation is even more valuable today than it was when first published. It should be required reading for undergraduate and graduate students (especially those at work on a degree in engineering, the natural sciences, mathematics, or business) as well as for executives in organizations which hope to survive the "age of nanotechnology." Think of your organization as a vehicle. Viewed as such, it obviously needs an engine, fuel, a transmission, a brake, an accelerator, etc. Speed is only one component of the formula for success. Durability is another. For your organization to reach its destination, it must also have a map. Engines of Creation is about technology, of course, and it is also about innovation in an age when speed is often the difference between success and failure. But Drexler also provides the

equivalent of a map to guide his reader. Misdirected speed can demolish an entire organization as well as a single vehicle....and those within it. Years from now, Engines of Creation will still be read and admired. Why? Because it will still be relevant.

Years ago, my friends and I realized that all the sciences were not really seperate fields, but linked by matter itself and the emerging laws of physics. Richard Feynman in the late '50s voiced the foundation of what Drexler further grew into a tour de force he coined 'nanotechnology'. When Drexler's 'Engines of Creation' appeared, I realized instantly that this book was the ignition point for a technological shift of such scope, that the majority of the population doesn't quite yet realize the incredible double-edged potential. The physics are there, the models are there, the amazing molecular complexity and abundance of life itself illustrates the possibilities; we only lack the tools; however, a simple search on the Net will show that they'll probably be here more quickly that we anticipate. Look at the estimates that it would take 20 years to decode DNA; recent breakthoughs will allow it to be complete by 2002. A must read for someone who wants to get their feet wet and ride the approaching wave.

"Engines of Creation" is one the most thoroughly enjoyable books I have ever read. It is well constructed and well thought out, expanding on every topic from memes to early Internet to the future application of molecular manufacturing. This book really jumped onto the scene when it was first published because of the astounding proposals made. But rather than being just another science fiction book, I think it well grounded in sound engineering and physical law. As of yet, no one has disproved it, and Mr. Drexler is certainly well-qualified to make the assertions he does. I would recommend this book as a excellent primer to anyone seeking to learn the basics of molecular nanotechnology.

Read most of this book on a week's vacation and I loved every bit of it. Gives great examples of the power of nanotechnology even though it was written in the 80's. Once you get through the first couple of chapters, which are mostly overview of how the machines could be produced and defining terms, the author begins to make light of the tremendous possibilities that nanotechnology will bring to the world. Mostly deals with living in space, medicine, and resources. Last couple of chapters dealt with mainly of the consequences of this new technology and its social implications. Loved it all the way through and an exellent book for both beginners of the subject or someone that just likes to read about an interesting proposal for the future.

A revolutionary text - the most important book to read and understand for anyone concerned with how technology will advance in the next 10-50 years. This is the clearest exposition of the possibility for the direct manipulation of matter at the atomic level available for the lay reader.Dr. Drexler introduces the concept of molecular nanotechnology and the tremendous impact of its promised capabilities on future generations. He begins by describing the physical reasoning behind the concept as introduced in a lecture given by (the late) Professor Richard Feynman titled, "There's More Room at the Bottom". Proceeding from the principle that physics does not prohibit the possiblity of directly manipulating atoms to build macroscopic objects, Drexler offers the molecular machines of living organisms as a proof of principle. Chapters are well organized and logically build on one another to present ever more complex and startling possibilities for engineering the world around us to suit specific needs without waste, at low cost and with positive environmental impact. Topics such as human longevity, space exploration, revolutions in materials, advanced cellular repair robots, supercomputers and artificial intelligence which surpasses human capabilities are all clearly described with more than plausible explanations of the process whereby they could be realized. Social issues and the impact on society and individuals are also discussed, though possibly naive in their projections. To learn more, contact the Foresight Institute at [...]

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