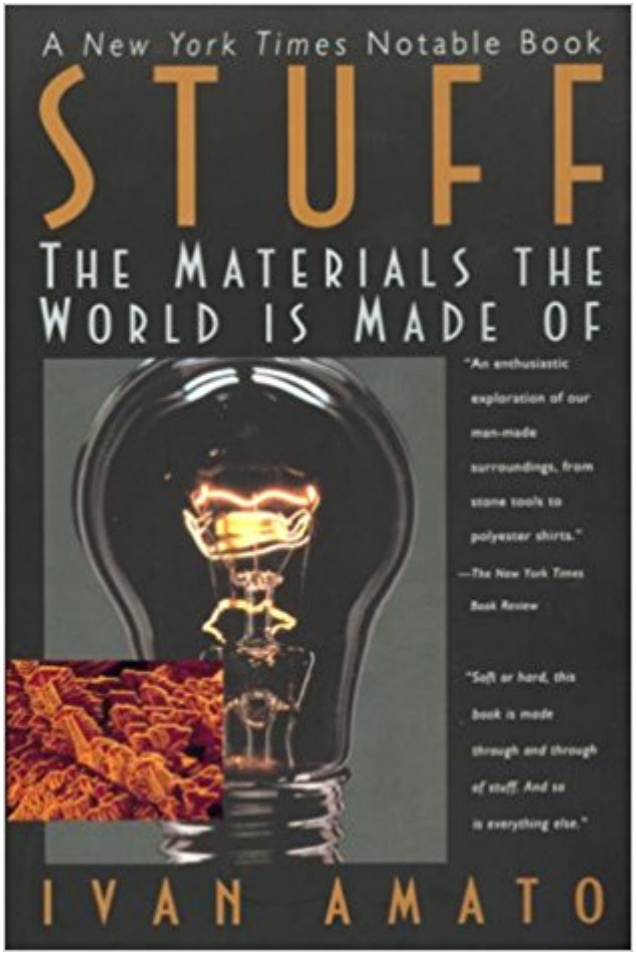
Stuff: Materials World



Synopsis

The way our world is, how it got there and where it’s going, is a direct result of the stuff we make other stuff out of: the metals, composites, ceramics, plastics and semi-conductors found in every man-made thing around us. From antique china to airplanes, transistor radios and supercomputers--from the Stone Age to the Electronics Age and far beyond--science writer Ivan Amato takes us ona remarkable journey through a breathtaking universe of enlightenment and challenge; revealing the secrets, exploring the astounding histories, introducing us to the genius personalities behind the discoveries, and unveiling the glorious future and possibilities of Stuff.

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Customer Reviews

"Stuff, stuff, everywhere stuff": Ivan Amato will make you appreciate how much ingenuity, history, and subtlety goes into even the most apparently mundane human-produced materials, such as paper or steel. Then he will astonish you by describing the Stuff of the future, the deliberate creations of today’s materials scientists: Buckyballs, synthetic diamonds, designs crafted at the atomic level, self-healing materials, and biomimetics. A revolution is just beginning that is "comparable in scope and importance to the beginning of the scientific method." --This text refers to an out of print or unavailable edition of this title.

Amato has drawn upon his experience covering science and technology topics for Science News and Science to write this history of materials science. In the book’s first half, he traces the subject

from Olduvai Gorge to Silicon Valley, chronicling the shift from largely serendipitous discoveries to steady improvements as the result of a trial-and-error approach. Amato then looks at today's cutting-edge materials research, in which new materials that never existed in the natural world (e.g., artificial diamonds made out of peanut butter) are being developed by design. Writing in a lively, readable style that will appeal to the nonexpert, Amato manages to convey his enthusiasm for the subject. The references at the end are largely bibliographic essays of books and articles suggested for further reading on each topic. Few other books cover the history of the discipline so succinctly or engagingly. Recommended for academic libraries and public libraries with strong science collections.?Wade Lee, Univ. of Toledo Libs.Copyright 1997 Reed Business Information, Inc. --This text refers to an out of print or unavailable edition of this title.

It's so great to find a layman's overview to the influence of materials science and engineering. The author covers the breakthroughs of ancient times, the birth of the discipline in the last century, and it's future directions. Great book for anyone who works even marginally with engineered materials! As a doctoral student in the field myself, it was fun to see how the author made complex concepts understandable to a wider audience.

Optimistic, easy-to-read, this charming history of the effect of new materials on society is filled with brilliant analogies. From the ceramics and bronze of prehistoric times through iron, steel, aluminum, polymers, transistors, silicon microchips and solid-state lasers, using personal interviews and a number of diagrams, Amato takes the reader on a joyful tour of what became Materials Science. This fount of good (but not excellent) explanations of many things is marred by a number of technical errors, and a Green Party stance on all of the current environmental issues. These flaws drag down what would have been a 5-star rating to 3 stars. The generally delicious writing style is marred by some problems with transitive verbs and a few slang expressions that may be hard to translate. Citation of sources is adequate. ...

Ivan Amato's Stuff: The Materials the World is Made of is a good, workmanlike history and description of "materials science." Basically, materials science involves the fashioning of one material of nature into another; Amato imagines the first "materials scientist" as the caveman breaking rocks to make the first tools. Modern materials science, of course, is focused much more on atomic and sub-atomic levels, and Amato does a good job describing the state of the art today. Much of his writing is a bit "gee whiz", both over-written and over-enthusiastic for my tastes. He

writes clearly and in a well-organized fashion, and I learned a fair amount from this book.

There’s nothing terribly wrong with this book, but unfortunately it came out at about the same time as Phillip Ball’s vastly superior "Made to Measure," which covered the same ground, at least as regards technology. Mr. Amato must be one of the few people on Earth who can be so awestruck by a technical conference -- he devotes at least an entire chapter to the thrill and wonder of a Materials Research Society meeting, which is, well, just a technical conference.

He manages to explain complicated things in a way me and you can understand them,and me makes you even more interested in the subjects he covers.

I think that stuff is a great book. If you are interested if the materials of the world, this is a great book.

As a mechanical engineer, I was exposed to a rather dry subject of material science limiting to a choise of performance curves that satisfied the load requirements. I bought this book some years ago and I was amazed on the explanation and depth of the coverage. Everything you wanted to know but were afraid to ask about materials is somehow reflected here, the history, the facts the whys.. As a special bonus there is a graph (page 243)that shows the interplay of factors that influence steel behaviour, just this is worth the reading... I wonder why is out of stock?..

Man-Made World Stuff: Materials World His Dark Materials Trilogy (His Dark Materials) Exam Prep: Hazardous Materials Awareness And Operations (Exam Prep: Hazardous Materials Awareness & Operations) Composite Materials: Materials, Manufacturing, Analysis, Design and Repair Electrodeposition: The Materials Science of Coatings and Substrates (Materials Science and Process Technology) Transport Phenomena in Materials Processing (The Minerals, Metals & Materials Series) Chemistry of Hazardous Materials (6th Edition) (Hazardous Materials Chemistry) Land Law: Text, Cases, and Materials (Text, Cases And Materials)