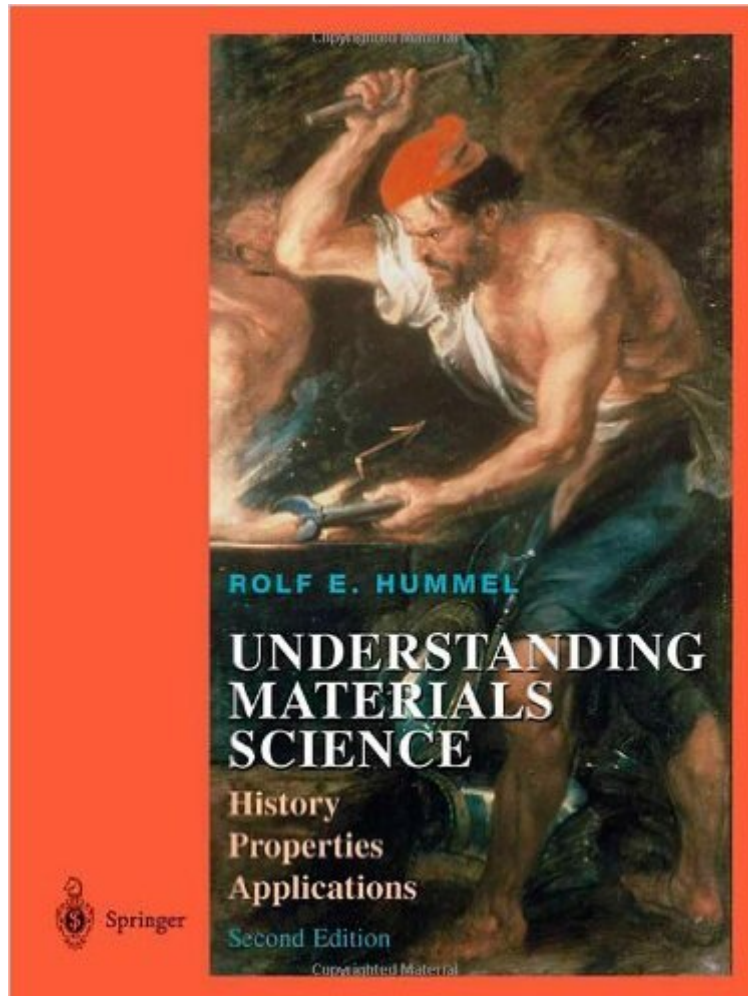


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# Understanding Materials Science



## Synopsis

This introduction to materials science for engineers examines not only the physical and engineering properties of materials, but also their history, uses, development, and some of the implications of resource depletion, materials substitutions, and so forth. Topics covered include: the stone, copper, bronze, and iron ages; physical properties of metals, ceramics, and plastics; electrical and magnetic properties of metals, semiconductors, and insulators; band structure of metals; metallurgy of iron. This new edition includes new developments in the last five years, updated graphs and other dated information and references.

## Book Information

File Size: 7476 KB

Print Length: 440 pages

Publisher: Springer New York; 2nd edition (May 11, 2006)

Publication Date: May 11, 2006

Sold by: Digital Services LLC

Language: English

ASIN: B000QECINC

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Enabled

Lending: Not Enabled

Enhanced Typesetting: Not Enabled

Best Sellers Rank: #1,114,961 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #56

in Kindle Store > Kindle eBooks > Nonfiction > Science > Physics > Solid-State Physics #206

in Books > Engineering & Transportation > Engineering > Materials & Material Science > Testing

#295 in Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Materials Science

## Customer Reviews

Even though I'm an anthropologist by training, I found this book to be the easiest, most knowledgeable and enjoyable text I've ever seen on materials and the role they've played in shaping both mankind, culture and the history of the field of materials science. Dr Hummel has written a brilliant and enlightening explanation of what makes "it" all tick. But he doesn't stop there. Materials students will appreciate the scientific explanations, problems and colorful illustrations (in the center

of the book) that make this a true scientific text (not just for laypersons like myself). If I were to give myself one book for Christmas, it would be this one.

The text shows an excellent review of materials science fundamentals and their relationship with history and current applications including conventional and new materials used in modern applications such as electronic and medicine. Problems with answers are also included. It is hard to find similar books about this subject that interestingly show historical aspects in conjunction with basic aspects of materials. Expert readers can probably find some topics too basic. However, the aim of the author seems to be to invite materials science beginners to be in touch with this fascinating world (such as students and young scientists and engineers). Academics can also find in this book useful information to support introductory courses and seminars concerning materials science and engineering. I hope that Prof. Hummel can enlarge some contents in future editions adding still more historical aspects. Nevertheless, my congratulations to Prof. Hummel on the second edition.

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