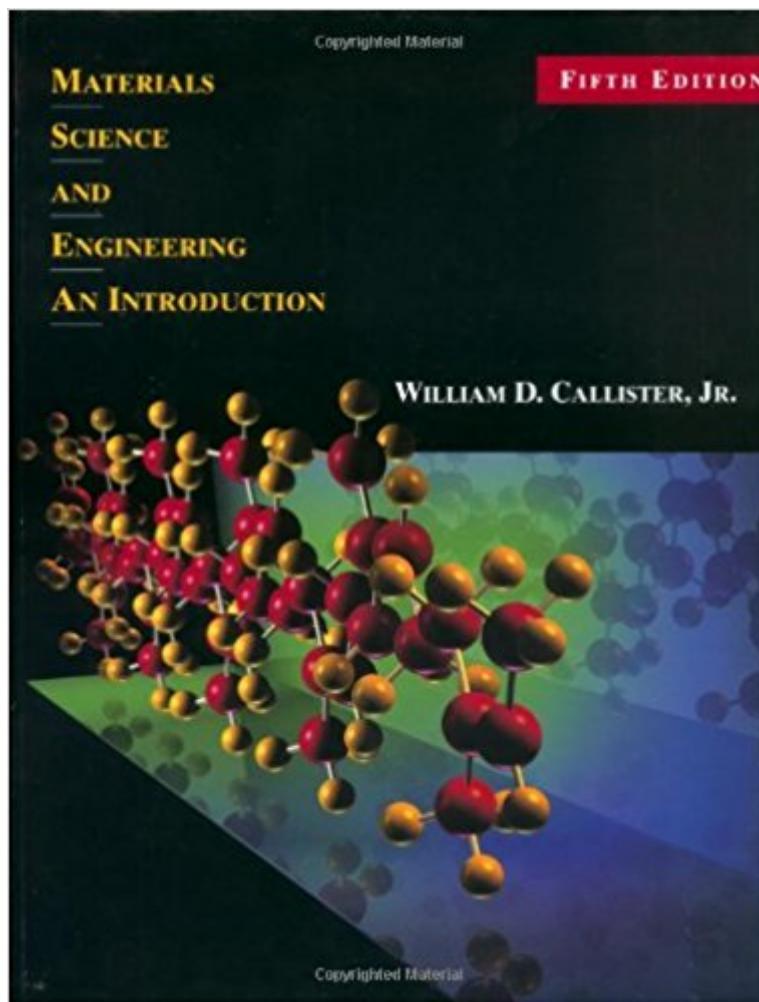


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# Materials Science And Engineering: An Introduction (5th Edition)



## **Synopsis**

Bill Callister continues his dedication to student understanding by writing in a clear and concise manner, using terminology that is familiar and not beyond student comprehension. Topics are organized and explained in an approachable manner, so that even instructors who do not have a strong materials background (i.e., those from mechanical, civil, chemical, or electrical engineering, or chemistry departments) can teach from this, already successful, text.

## **Book Information**

Hardcover: 896 pages

Publisher: Wiley; 5 edition (July 27, 1999)

Language: English

ISBN-10: 0471320137

ISBN-13: 978-0471320135

Product Dimensions: 8.3 x 1.3 x 10.2 inches

Shipping Weight: 4 pounds

Average Customer Review: 4.4 out of 5 stars 74 customer reviews

Best Sellers Rank: #109,724 in Books (See Top 100 in Books) #107 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Materials Science #643 in Books > Textbooks > Engineering

## **Customer Reviews**

Solutions Manual, Transparencies and Interactive Simulation Software Package available. -- The publisher, John Wiley & Sons --This text refers to an out of print or unavailable edition of this title.

The latest edition of this bestselling textbook treats the important properties of three primary types of material--metals, ceramics, polymers--as well as composites. Describes the relationships that exist between the structural elements of these materials and their characteristics. Emphasizes mechanical behavior and failure along with techniques used to improve the mechanical and failure properties in terms of alteration of structural elements. Individual chapters discuss each of the corrosion, electrical, thermal, magnetic, and optical properties plus economic, environmental, and societal issues. Features a design component which includes design examples, case studies, and design type problems and questions. --This text refers to an out of print or unavailable edition of this title.

I would consider this a good undergraduate level text for an introduction to material science, as the title implies. It has good illustrations, nice web content to accompany the text. It does not require the web content to easily understand the material... HOWEVER, the last several chapters of this edition are pdf's available on the web only and referenced in the index by W1,W2, W3, etc. Not ideal, especially considering that you get only 360 days access to those chapters. I would have preferred them to be part of the text. One of those web chapters was a primary reason for purchasing this book. Other than this, it has good coverage of the basics and is an easy read for those interested in the subject, especially if you do not a Material Scientist. It provides a conceptual understanding of metals, ceramics and polymers. How their properties arise from their atomic/molecular structure as well as how processes impact these properties. Very good walkthrough of how to interpret phase diagrams for unary and binary systems... I perhaps would be interested in the latest edition to see if more complex phase diagrams are covered, seeing as how the industry I work in has moved away from binary alloys and are now mostly tertiary and quad alloys, it would help to see coverage of these. There is a mention of this in this edition, but none are covered in detail. Overall a very good reference.

Excellent. Written well enough I can follow most of it. That is a recommendation in itself. Only in first 100 pages so far but I have read enough to confirm rest of it is worth reading. When I read a book slowly that's because the author has kept my interest.

A must have for any materials scientist or engineer working with materials properties. Does not go into crazy detail on any one subject but has enough basic theory in all materials to educate you enough to find papers with more detail.

Great for reference and reviewing...

I am studying Mechanical Engineering, this book is really useful for me to get a better understanding of Materials science and the exercises is sufficient for me to get a good grade.

This is the previous edition my university uses. This got me through the course with no problems (homework was online). It is pretty much the same as the newer edition.

This book helped me to prepare for a class that I did not have the prerequisites for. The material

was very relevant to what I am now learning.

Great quality book at a great price! Also, seller did a great job getting it to me promptly.

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