Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics)

By Eric J. Mittemeijer

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer

This book offers a strong introduction to fundamental concepts on the basis of materials science. It conveys the central issue of materials science, distinguishing it from merely solid state physics and solid state chemistry, namely to develop models that provide the relation between the microstructure and the properties. The book is meant to be used in the beginning of a materials science and engineering study as well as throughout an entire undergraduate and even graduate study as a solid background against which specialized texts can be studied. Topics dealt with are "crystallography", "lattice defects", "microstructural analysis", "phase equilibria and transformations" and "mechanical strength". After the basic chapters the coverage of topics occurs to an extent surpassing what can be offered in a freshman's course.

About the author
Prof. Mittemeijer is one of the top scientists in materials science, whose perceptiveness and insight have led to important achievements. This book witnesses of his knowledge and panoramic overview and profound understanding of the field. He is a director of the Max Planck Institute for Metals Research in Stuttgart.

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics)

By Eric J. Mittemeijer

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer

This book offers a strong introduction to fundamental concepts on the basis of materials science. It conveys the central issue of materials science, distinguishing it from merely solid state physics and solid state chemistry, namely to develop models that provide the relation between the microstructure and the properties. The book is meant to be used in the beginning of a materials science and engineering study as well as throughout an entire undergraduate and even graduate study as a solid background against which specialized texts can be studied. Topics dealt with are "crystallography", "lattice defects", "microstructural analysis", "phase equilibria and transformations" and "mechanical strength". After the basic chapters the coverage of topics occurs to an extent surpassing what can be offered in a freshman's course.

About the author
Prof. Mittemeijer is one of the top scientists in materials science, whose perceptiveness and insight have led to important achievements. This book witnesses of his knowledge and panoramic overview and profound understanding of the field. He is a director of the Max Planck Institute for Metals Research in Stuttgart.

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer Bibliography

- Sales Rank: #2387324 in Books
- Published on: 2011-06-02
- Original language: English
- Number of items: 1
- Dimensions: 10.60" h x 1.20" w x 7.90" l, 3.90 pounds
- Binding: Hardcover
- 594 pages

Editorial Review

Review

From the reviews:

“This book is intended as an introduction to the fundamentals of materials science, with a strong emphasis on metallic materials. … Overall this book provides a refreshing treatment of this important subject and should prove a useful addition to the existing text books available to undergraduate and graduate students and researchers in the field of materials science. It would also prove useful in providing a science base for students studying materials engineering subjects.” (Michael Davies, Materials World, October, 2011)

“The present book is a treatise on the basics of materials science, but at the same time it is intended for the beginners as well. The book is undoubtedly is a reference book as well, and in no case be cast aside by the students after completion of their one or two semester course exposure. … The readers would love to keep this book in their nearest shelf. The important references given at the end of each chapter are classical ones and of enduring importance.” (G. S. Upadhyaya, Science of Sintering, Vol. 43, 2011)

From the Back Cover

This book offers a strong introduction to fundamental concepts on the basis of materials science. It conveys the central issue of materials science, distinguishing it from merely solid state physics and solid state chemistry, namely to develop models that provide the relation between the microstructure and the properties. The book is meant to be used in the beginning of a materials science and engineering study as well as throughout an entire undergraduate and even graduate study as a solid background against which specialized texts can be studied. Topics dealt with are "crystallography", "lattice defects", "microstructural analysis", "phase equilibria and transformations" and "mechanical strength". After the basic chapters the coverage of topics occurs to an extent surpassing what can be offered in a freshman's course.

About the author
Prof. Mittemeijer is one of the top scientists in materials science, whose perceptiveness and insight have led to important achievements. This book witnesses of his knowledge and panoramic overview and profound understanding of the field. He is a director of the Max Planck Institute for Metals Research in Stuttgart.

About the Author

Eric Jan Mittemeijer was born in 1950 in Haarlem, The Netherlands. He studied "chemical technology", with specialization physical chemistry, at the Delft University of Technology and acquired his "ingenieur (= Ir.)" degree (comparable to a M.Sc. degree) in 1972 and his Ph.D. degree in 1978. From 1985 till 1998 he was full Professor of Solid State Chemistry at the Delft University of Technology. Since 1998 he is Director at the Max Planck Institute for Metals Research in Stuttgart in conjunction with a full Professorship in Materials Science at the University of Stuttgart. He is Dean of the Study Course Materials Science of the University of Stuttgart and Speaker of the International Max Planck Research School on Advanced Materials. He leads a

research department in the field of Phase Transformations. He has (co-)authored more than 580 scientific papers in international scientific journals and has received a number of honours for his scientific work.

Users Review

From reader reviews:

Angela Dreiling:

Now a day people that Living in the era just where everything reachable by connect with the internet and the resources included can be true or not demand people to be aware of each data they get. How people have to be smart in having any information nowadays? Of course the correct answer is reading a book. Examining a book can help people out of this uncertainty Information especially this Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) book as this book offers you rich data and knowledge. Of course the data in this book hundred per cent guarantees there is no doubt in it everbody knows.

Sonya Ewing:

Information is provisions for individuals to get better life, information today can get by anyone at everywhere. The information can be a understanding or any news even an issue. What people must be consider if those information which is inside former life are challenging be find than now could be taking seriously which one is appropriate to believe or which one typically the resource are convinced. If you find the unstable resource then you obtain it as your main information you will have huge disadvantage for you. All of those possibilities will not happen throughout you if you take Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) as the daily resource information.

Kenneth Allen:

Do you really one of the book lovers? If yes, do you ever feeling doubt if you find yourself in the book store? Aim to pick one book that you just dont know the inside because don't assess book by its protect may doesn't work this is difficult job because you are scared that the inside maybe not as fantastic as in the outside search likes. Maybe you answer might be Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) why because the wonderful cover that make you consider about the content will not disappoint anyone. The inside or content will be fantastic as the outside or cover. Your reading sixth sense will directly make suggestions to pick up this book.

Jennifer Pittman:

Within this era which is the greater person or who has ability in doing something more are more important than other. Do you want to become one among it? It is just simple approach to have that. What you are related is just spending your time almost no but quite enough to experience a look at some books. On the list of books in the top list in your reading list is actually Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics). This

book and that is qualified as The Hungry Hillsides can get you closer in turning out to be precious person. By looking way up and review this book you can get many advantages.

Read Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer for online ebook

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer books to read online.

Online Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer ebook PDF download

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer Doc

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer Mobipocket

Fundamentals of Materials Science: The Microstructure–Property Relationship Using Metals as Model Systems (Graduate Texts in Physics) By Eric J. Mittemeijer EPub