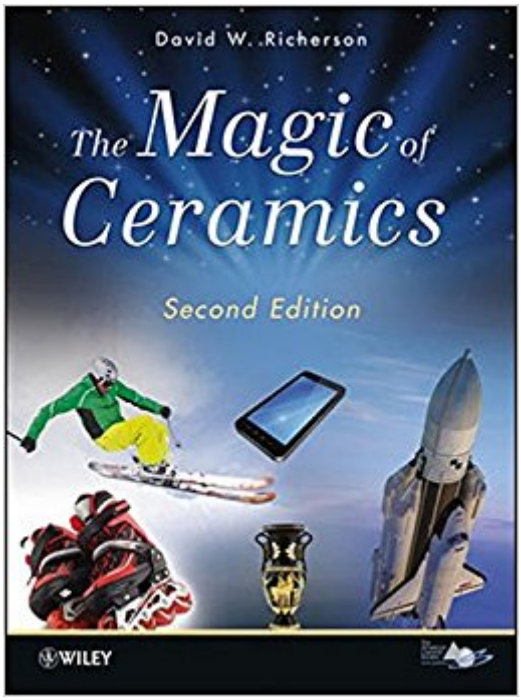
The Magic Of Ceramics



Synopsis

Most people would be surprised at how ceramics are used, from creating cellular phones, radio, television, and lasers to its role in medicine for cancer treatments and restoring hearing. The Magic of Ceramics introduces the nontechnical reader to the many exciting applications of ceramics, describing how ceramic material functions, while teaching key scientific concepts like atomic structure, color, and the electromagnetic spectrum. With many illustrations from corporations on the ways in which ceramics make advanced products possible, the Second Edition also addresses the newest areas in ceramics, such as nanotechnology.

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Customer Reviews

Ã¢â ¬Å“It would be of interest to someone who wants to learn about the history of ceramics, and get a basic understanding of the unique properties that ceramics possess, in an easy and fun way.Ã¢â ¬Â•Ã Â (IEEE Electrical Insulation Magazine, 1 September 2013

There’s so much you probably don’t know about ceramics. . . Ceramics are amazing materials! Without ceramics, we wouldn’t have television, laptop computers, wireless communications, the Internet, computer-generated movie scenes, the Space Shuttle, or even cars. Reading this book, you’ll discover not only some of the magic that ceramics can do, you’ll also come to understand the fascinating science that makes that magic happen. You’ll learn how ceramics interact with light to make lasers possible; how ceramics that are stronger than steel can be used for bulletproof armor;

how magnetic ceramics played a key role in building the first computers; and how a new field of bioceramics has recently emerged, promising new medical breakthroughs. This Second Edition of The Magic of Ceramics brings the book fully up to date with new developments in the field, such as major advances in pollution control, energy harvesting and conversion, digital electronics, medicine, and nanotechnology. Be sure to read the final chapter, which not only discusses the most recent breakthroughs in ceramics, but also provides a glimpse into its future. Did you know? Ceramics can be so strong that a one-inch diameter ceramic cable can lift fifty cars Some ceramics conduct electricity better than metals Ceramic automotive emission control systems have reduced pollution by billions of tons The key to treating liver cancer may be ceramics Ceramic fiberglass house insulation has saved more than 30 quadrillion BTUs of heat Look inside the book and discover even more incredible things you probably never realized that ceramics could do.

Works great, just what i wanted.

The Magic of Ceramics is a well-written book that reads similar to a upper-level high school textbook. It was amazing for me to find out how limited my knowledge of ceramics really was. As an artist, I was previously only familiar with the more traditional forms of ceramics (you will find them in chapters two and three).However, I like this book more for my son (who is in his mid-teens). He has a fascination with acquiring a wide-range of knowledge just for fun.This certainly would fulfill the curiosity of any other like-minded individuals who also enjoy reading about anything science-related for fun. You will see how far-reaching the involvement of ceramics is in our society. By learning about ceramics, one could easily come away from this book feeling that they’ve learned a bit about EVERYTHING.The Magic of Ceramics will clear up any misconceptions one may have regarding ceramics, as it takes the reader through its birth as well as its various uses throughout history. You will then learn in-depth about modern ceramics and chapters of specific fields that use ceramics-even projections about future products and uses.This book is VERY detailed, without being too cluttered by figures. Still, there are charts/graphs to illustrate examples and chemical formulas...I really like how there are points throughout it highlighting "Amazing Facts." Ideally, I wish this there were more of these, and that the book also included study questions at the end of each chapter.The Magic of Ceramics is highly-informative. I recommend it particularly for anyone who is in a career (or is interested in one) involving ceramics or a field that includes any of a multitude of its applications.

"The Magic of Ceramics" is published by the American Ceramics Society not as a technical manual or textbook for scientists and engineers but as an educational and entertaining book for the general public. They have certainly succeeded in their aim of producing a fascinating and accessible introduction to the wide range of ceramics and their applications and may even spark some interest in youngsters for pursing a career in ceramic engineering.Like plastics, we tend to take ceramics for granted and fail to recognize their importance in our daily livesÃ¢â ¬â •although we shouldn't. This is the remedy and I very highly recommend it as pleasurable non-fiction.

ISBN 0470638052 (The Magic of Ceramics) is very well published and, though without difficult technical aspects, still a broad introduction to the fashionable topic of omnipresent ceramics. It is a very well written and illustrated album easy to understand by non-professionals despite its possibly perceived hint of technicality. The content is up to date and very informative. It provides an excellent introduction to the subject, and - as such - it belongs in the library (or coffee table) of every family.Approx. 290 pages of the book are shown by the .com's "LOOK INSIDE!" function to allow everyone to see it by himself. What you cannot see is that the book is superbly printed on excellent semi-glossy paper and very well hard-bound. The covers are strong and flexibly jointed. It is a beautiful semi-technical album, but at a price.

This book is a very thorough collection of all sorts of examples of the use of ceramics. It is like a huge science museum of ceramics, or like multiple episodes of the documentary series Modern Marvels focusing only on ceramics.It starts with an overview of all the applications of ceramics and ceramics history. The third chapter is about ceramic and glass art, from ancient times to the present day. Subsequent chapters concentrate on specific applications of ceramics, e.g. light, electronics, medical, hot uses, energy, and so forth. Each subsection is readable on its own, so you can open the book anywhere and begin reading.The book is very well illustrated, replete with photographs and diagrams. Each subtopic has at least one illustration, a number of which are for things I knew about but have never seen, or for obscure industrial objects I didn't know about. For example, on p. 129 there are photographs of ceramic ring magnets used in core memory of early computers. Chapter 12 shows ceramic filters used in fuel cells, and has a diagram that shows how fuel cells work (which I've always wondered about).I was interested in this book because I've used ceramics in glassblowing and pottery, and I just like to know about science stuff. This book is a much broader and more thorough survey than I was expecting. It explains how things work in words and diagrams, for example, photo voltaic cells (p. 256), but not to the level of equations. So if you are looking for

things like like annealing equations and coefficients of expansion, etc., look elsewhere.The book's title sounds like it is written for a younger audience, but the book is written at an adult level (or for interested younger readers). It looks like a well-done intro textbook for a materials science class, but there are no questions at the ends of the chapters. It turns out that it is an educational outreach project of the American Ceramics Society, which started with a "museum exhibit to introduce the general public and students to the amazing uses of ceramics" (preface).