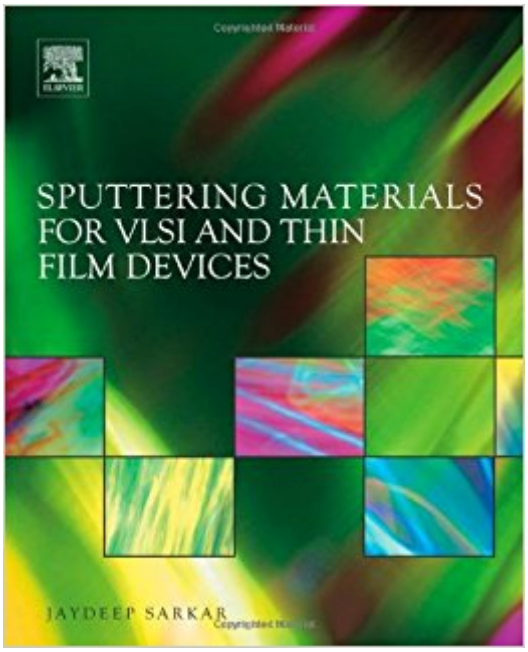
Ebook Directory
the best source of ebook

The book was found

Sputtering Materials For VLSI And Thin Film Devices



PDF
Adobe
DOWNLOAD EBOOK

Synopsis

An important resource for students, engineers and researchers working in the area of thin film deposition using physical vapor deposition (e.g. sputtering) for semiconductor, liquid crystal displays, high density recording media and photovoltaic device (e.g. thin film solar cell) manufacturing. This book also reviews microelectronics industry topics such as history of inventions and technology trends, recent developments in sputtering technologies, manufacturing steps that require sputtering of thin films, the properties of thin films and the role of sputtering target performance on overall productivity of various processes. Two unique chapters of this book deal with productivity and troubleshooting issues. The content of the book has been divided into two sections: (a) the first section (Chapter 1 to Chapter 3) has been prepared for the readers from a range of disciplines (e.g. electrical, chemical, chemistry, physics) trying to get an insight into use of sputtered films in various devices (e.g. semiconductor, display, photovoltaic, data storage), basic of sputtering and performance of sputtering target in relation to productivity, and (b) the second section (Chapter 4 to Chapter 8) has been prepared for readers who already have background knowledge of sputter deposition of thin films, materials science principles and interested in the details of sputtering target manufacturing methods, sputtering behavior and thin film properties specific to semiconductor, liquid crystal display, photovoltaic and magnetic data storage applications. In Chapters 5 to 8, a general structure has been used, i.e. a description of the applications of sputtered thin films, sputtering target manufacturing methods (including flow charts), sputtering behavior of targets (e.g. current - voltage relationship, deposition rate) and thin film properties (e.g. microstructure, stresses, electrical properties, in-film particles). While discussing these topics, attempts have been made to include examples from the actual commercial processes to highlight the increased complexity of the commercial processes with the growth of advanced technologies. In addition to personnel working in industry setting, university researchers with advanced knowledge of sputtering would also find discussion of such topics (e.g. attributes of target design, chamber design, target microstructure, sputter surface characteristics, various troubleshooting issues) useful. .Unique coverage of sputtering target manufacturing methods in the light of semiconductor, displays, data storage and photovoltaic industry requirementsPractical information on technology trends, role of sputtering and major OEMs Discussion on properties of a wide variety of thin films which include silicides, conductors, diffusion barriers, transparent conducting oxides, magnetic films etc.Practical case-studies on target performance and troubleshootingEssential technological information for students, engineers and scientists working in the semiconductor, display, data storage and photovoltaic industry

Book Information

Hardcover: 608 pages

Publisher: William Andrew; 1 edition (November 8, 2013)

Language: English

ISBN-10: 0815515936

ISBN-13: 978-0815515937

Product Dimensions: 1.8 x 7.5 x 9.2 inches

Shipping Weight: 2.7 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,984,605 in Books (See Top 100 in Books) #76 inÃ Â Books > Engineering & Transportation > Engineering > Electrical & Electronics > Circuits > VLSI & ULSI #155 inÃ Â Books > Engineering & Transportation > Engineering > Materials & Material Science > Extraction & Processing #228 inÃ Â Books > Engineering & Transportation > Engineering > Electrical & Electronics > Circuits > Integrated

Customer Reviews

Engineering Consultant at Praxair Inc., Orangeburg, New York, USA

Download to continue reading...

Sputtering Materials for VLSI and Thin Film Devices VLSI DESIGN SIMPLE AND LUCID EXPLANATION: vlsi design for students Circuits, Interconnections, and Packaging for Vlsi (Addison-Wesley VLSI systems series) Computational Explorations in Magnetron Sputtering Thin Film Materials: Stress, Defect Formation and Surface Evolution Eat Fat, Get Thin Fast!: Eat Fat and Get Thin with the best healthy high fat recipes; Complete pictures, nutrition facts, and serving sizes for every single recipe! ACI 318.2-14: Building Code Requirements for Concrete Thin Shells (ACI 318.2-14) and Commentary on Building Code Requirements for Concrete Thin Shells (ACI 318.2R-14) Summary - Eat Fat Get Thin: By Mark Hyman - Why the Fat We Eat Is the Key to Sustained Weight Loss... (Eat Fat, Get Thin: A Complete Summary - Book, Paperback, Audiobook, Audible, Hardcover,) The Thin Book of Appreciative Inquiry (3rd Edition) (Thin Book Series) Fundamentals of Modern VLSI Devices Handbook of Organic Materials for Optical and (Opto)Electronic Devices: Properties and Applications (Woodhead Publishing Series in Electronic and Optical Materials) The Film Encyclopedia 7th Edition: The Complete Guide to Film and the Film Industry Semiconductor Materials and Process Technology Handbook (VLSI and ULSI) Integrated circuit devices and components (Integrated-circuit technology, analog and logic circuit design,

memory and display devices) Prostheses: Design, Types, and Complications (Biomedical Devices and Their Applications; Medical Devices and Equipment) Thin-Film Optical Filters, Fourth Edition (Series in Optics and Optoelectronics) Thin-Film Optical Filters, Third Edition (Series in Optics and Optoelectronics) Thin Film Technology Handbook Thin Film Processes US Army Technical Manual, ARMY DATA SHEETS FOR CARTRIDGES, CARTRIDGE ACTUATED DEVICES AND PROPELLANT ACTUATED DEVICES, FSC 1377, TM 43-0001-39, 1991

Contact Us

DMCA

Privacy

FAQ & Help