

1. Record Nr.	UNISALENTO991001461049707536
Autore	Cayley, Arthur
Titolo	Trattato elementare delle funzioni ellittiche / di Arturo Cayley ; trad. di F. Brioschi
Pubbl/distr/stampa	Milano : Ulrico Hoepli, 1880
Descrizione fisica	xv, 449 p. ; 24 cm
Classificazione	AMS 01A75 AMS 33-03 AMS 33E05
Disciplina	515.983
Soggetti	Collected works-Cayley, Arthur Elliptic functions Special functions - History
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Ex Libris Mario Lombardo

2. Record Nr.	UNISALENTO991003235429707536
Autore	Ohring, Milton, 1936-
Titolo	Materials science of thin films [e-book] : deposition and structure / Milton Ohring
Pubbl/distr/stampa	San Diego, CA : Academic Press, 2002
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Edizione	[2nd ed.]
Descrizione fisica	xxi, 794 p. : ill. ; 24 cm
Disciplina	621.3815/2
Soggetti	Thin films Couches minces Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Foreword to First Edition -- Preface -- Acknowledgments -- A Historical Perspective -- Chapter 1 A Review of Materials Science -- 1.1. Introduction -- 1.2. Structure -- 1.3. Defects in Solids -- 1.4. Bonds and Bands in Materials -- 1.5. Thermodynamics of Materials -- 1.6. Kinetics -- 1.7. Nucleation -- 1.8. An Introduction to Mechanical Behavior -- 1.9. Conclusion -- Exercises -- References -- Chapter 2 Vacuum Science and Technology -- 2.1. Introduction -- 2.2. Kinetic Theory of Gases -- 2.3. Gas Transport and Pumping -- 2.4. Vacuum Pumps -- 2.5. Vacuum Systems -- 2.6. Conclusion -- Exercises -- References -- Chapter 3 Thin-Film Evaporation Processes -- 3.1. Introduction -- 3.2. The Physics and Chemistry of Evaporation -- 3.3. Film Thickness Uniformity and Purity -- 3.4. Evaporation Hardware -- 3.5. Evaporation Processes and Applications -- 3.6. Conclusion -- Exercises -- References -- Chapter 4 Discharges, Plasmas, and Ion-Surface Interactions -- 4.1. Introduction -- 4.2. Plasmas, Discharges, and Arcs -- 4.3. Fundamentals of Plasma Physics -- 4.4. Reactions in Plasmas -- 4.5. Physics of Sputtering -- 4.6. Ion Bombardment Modification of Growing Films -- 4.7. Conclusion -- Exercises -- References -- Chapter 5 Plasma and Ion Beam Processing of Thin Films -- 5.1. Introduction -- 5.2. DC, AC, and Reactive Sputtering Processes -- 5.3. Magnetron Sputtering -- 5.4. Plasma Etching -- 5.5. Hybrid and

Modified PVD Processes -- 5.6. Conclusion -- Exercises -- References -- Chapter 6 Chemical Vapor Deposition -- 6.1. Introduction -- 6.2. Reaction Types -- 6.3. Thermodynamics of CVD -- 6.4. Gas Transport -- 6.5. Film Growth Kinetics -- 6.6. Thermal CVD Processes -- 6.7. Plasma-Enhanced CVD Processes -- 6.8. Some CVD Materials Issues -- 6.9. Safety -- 6.10. Conclusion -- Exercises -- References -- Chapter 7 Substrate Surfaces and Thin-Film Nucleation -- 7.1. Introduction -- 7.2. An Atomic View of Substrate Surfaces -- 7.3. Thermodynamic Aspects of Nucleation -- 7.4. Kinetic Processes in Nucleation and Growth -- 7.5. Experimental Studies of Nucleation and Growth -- 7.6. Conclusion -- Exercises -- References -- Chapter 8 Epitaxy -- 8.1. Introduction -- 8.2. Manifestations of Epitaxy -- 8.3. Lattice Misfit and Defects in Epitaxial Films -- 8.4. Epitaxy of Compound Semiconductors -- 8.5. High-Temperature Methods for Depositing Epitaxial Semiconductor Films -- 8.6. Low-Temperature Methods for Depositing Epitaxial Semiconductor Films -- 8.7. Mechanisms and Characterization of Epitaxial Film Growth -- 8.8. Conclusion -- Exercises -- References -- Chapter 9 Film Structure -- 9.1. Introduction -- 9.2. Structural Morphology of Deposited Films and Coatings -- 9.3. Computational Simulations of Film Structure -- 9.4. Grain Growth, Texture, and Microstructure Control in Thin Films -- 9.5. Constrained Film Structures -- 9.6. Amorphous Thin Films -- 9.7. Conclusion -- Exercises -- References -- Chapter 10 Characterization of Thin Films and Surfaces -- 10.1. Introduction -- 10.2. Film Thickness -- 10.3. Structural Characterization of Films and Surfaces -- 10.4. Chemical Characterization of Surfaces and Films -- 10.5. Conclusion -- Exercises -- References -- Chapter 11 Interdiffusion, Reactions, and Transformations in Thin Films -- 11.1. Introduction -- 11.2. Fundamentals of Diffusion -- 11.3. Interdiffusion in Thin Metal Films -- 11.4. Compound Formation and Phase Transformations in Thin Films -- 11.5. Metal-Semiconductor Reactions -- 11.6. Mass Transport in Thin Films under Large Driving Forces -- 11.7. Conclusion -- Exercises -- References -- Chapter 12 Mechanical Properties of Thin Films -- 12.1. Introduction -- 12.2. Mechanical Testing and Strength of Thin Films -- 12.3. Analysis of Internal Stress -- 12.4. Techniques for Measuring Internal Stress in Films -- 12.5. Internal Stresses in Thin Films and Their Causes -- 12.6. Mechanical Relaxation Effects in Stressed Films -- 12.7. Adhesion -- 12.8. Conclusion -- Exercises -- References -- Index

A review of materials science -- Vacuum science and technology -- Thin-film evaporation processes -- Discharges, plasmas, and ion-surface interactions -- Plasma and ion beam processing of thin films -- Chemical vapor deposition -- Substrate surfaces and thin-film nucleation -- Epitaxy -- Film structure -- Characterization of thin films and surfaces -- Interdiffusion, reactions, and transformations in thin films -- Mechanical properties of thin films.

Sommario/riassunto

This is the first book that can be considered a textbook on thin film science, complete with exercises at the end of each chapter. Ohring has contributed many highly regarded reference books to the AP list, including Reliability and Failure of Electronic Materials and the Engineering Science of Thin Films. The knowledge base is intended for science and engineering students in advanced undergraduate or first-year graduate level courses on thin films and scientists and engineers who are entering or require an overview of the field. Since 1992, when the book was first published, the field of thin films has expanded tremendously, especially with regard to technological applications. The second edition will bring the book up-to-date with regard to these advances. Most chapters have been greatly updated, and several new

chapters have been added
