1. Record Nr. UNINA9910790864503321

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Titolo	Sputtering materials for VLSI and thin film devices / / by Jaydeep Sarkar
Pubbl/distr/stampa	Oxford ; ; Boston : , : William Andrew Publishing, , 2014
ISBN	0-12-810080-X 0-8155-1987-7
Edizione	[First edition.]
Descrizione fisica	1 online resource (614 p.)
Disciplina	621.381
Soggetti	Microelectronics - Materials Flat panel displays - Materials Sputtering (Physics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Sputtering Materials for VLSI and Thin Film Devices; Copyright Page; Contents; Preface; 1 Sputtering Targets and Sputtered Films for the Microelectronic Industry; 1.1 Materials for microelectronics; 1.1.1 Introduction; 1.1.1.1 Electrical conductivity; 1.1.2 Conductors; 1.1.3 Semiconductors; 1.1.4 Insulators; 1.2 Scope of sputtering in microelectronics; 1.3 Sputtering materials for integrated circuits; 1.3.1 Introduction; 1.3.2 Silicide contact; 1.3.3 Conductor, liner, barrier and anti-reflection coating; 1.3.4 Assembly and packaging (back-end processes) 1.3.4.1 Under bump metallization (UBM) and bond pad1.3.4.2 Through-silicon-via (TSV); 1.4 Sputtering materials for liquid crystal displays; 1.4.1 Introduction; 1.4.2 Active-matrix liquid crystal displays; 1.4.2.1 TFT array fabrication; 1.4.2.2 Cell assembly and Module assembly fabrication; 1.5 Sputtering materials for magnetic storage systems; 1.5.1 Introduction; 1.5.2 Thin film heads; 1.5.2.1 Inductive head; 1.5.2.2 Magnetoresistive head (MR heads); 1.5.2.3 Giant magnetoresistive head (GMR head); 1.5.3 Magnetic recording media; 1.6 Sputtering materials for optical storage media 1.7 Sputtering materials for photovoltaic devices1.7.1 Silicon wafer based solar cells; 1.7.2 Thin film solar cells; 1.8 Sputtering target industry; References; 2 Sputtering and Thin Film Deposition; 2.1

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2.4.4.3 Hollow cathode magnetron2.4.4.4 Magnetrons for large area coating; 2.5 Thin film characteristics; References; 3 Performance of Sputtering Targets and Productivity; 3.1 Introduction; 3.2 Target chemistry; 3.3 Target metallurgy; 3.3.1 Grain size inhomogeneity and banding of grains; 3.3.2 Second-phase particles, inclusions and porosity; 3.3.3 Preferred orientation of grains; 3.3.4 Sputter surface roughness and overall finish; 3.3.5 Particle performance; 3.3.6 Target bond characteristics; 3.4 Ferromagnetic targets; 3.5 Target cleaning and packaging; 3.6 Target burn-in
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4.3.2.3.3 Consolidation practice

Sommario/riassunto

An important resource for the microelectronics and flat panel display industries, this book focuses on the development of sputtering targets for conductor, diffusion barrier, reflective, data storage and display applications. Sarkar reviews essential microelectronics industry topics, including: history and technology trends; chip making fundamentals; deposition and properties of thin films; and the role of sputtering target performance on overall production yield. Materials science fundamentals, types of metallic materials for conductors, diffusion barrier, data storage, and flat pan