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4.3.5 Cold Cathode Ionization Gauge (Penning Principle)4.3.6 Leakage and Leak Detection; 4.4 Properties of Thin Films; 4.4.1 Structure Zone Model; 4.4.2 Adhesive Strength of the Layer; 4.5 Physical and Chemical Coating Techniques; 4.5.1 Evaporation; 4.5.2 Sputtering; 4.5.3 Ion Plating or Plasma Assisted Deposition; 4.5.4 Ion Cluster Beam Technology; 4.5.5 CVD Processes; 4.5.6 Epitaxy; 4.5.7 Plasma Polymerization; 4.5.8 Oxidation; 4.6 Structuring of Thin Films with Dry Etch Processes; 4.6.1 Physical Etch Technologies; 4.6.2 Combined Physical and Chemical Etch Technologies
4.6.3 Chemical Etching Technologies4.7 Analysis of Thin Films and Surfaces; 4.7.1 Electron Probe Microanalysis (EPM); 4.7.2 Auger Electron Spectroscopy (AES); 4.7.3 X-Ray Photoelectron Spectroscopy (XPS); 4.7.4 Secondary Ion Mass Spectroscopy (SIMS); 4.7.5 Secondary Neutral Particle Mass Spectroscopy (SNMS); 4.7.6 Ion Scattering Spectroscopy (ISS); 4.7.7 Rutherford Back Scattering Spectroscopy (RBS); 4.7.8 Scanning Tunneling Microscope; 5 Lithography; 5.1 Overview and History; 5.2 Resists; 5.3 Process of Lithography; 5.4 Computer Aided Design (CAD); 5.4.1 CAD-Layout
5.4.2 Alignment Patterns and Test Structures

Sommario/riassunto

This completely revised edition of a bestselling concise introduction to microsystems technology includes the latest trends in this emerging scientific discipline. The chapters on silicium and LIGA technology are greatly expanded, whilst new topics include application aspects in medicine and health technology, lithography and electroplating.