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Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1996
ISBN	0-309-57353-X 0-585-08454-8
Descrizione fisica	1 online resource (74 p.)
Collana	The compass series
Soggetti	Semiconductors - Design and construction Plasma engineering - Databases Plasma engineering - Computer simulation Electronic books.
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Formato	Materiale a stampa
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Nota di contenuto	""Database Needs for Modeling and Simulation of Plasma Processing""; ""Copyright""; ""Preface""; ""Contents""; ""Executive Summary""; ""FINDINGS""; ""CONCLUSIONS""; ""RECOMMENDATIONS""; ""REFERENCES""; ""1 Industrial Perspectives ""; ""INTRODUCTION""; ""PLASMA PROCESSING FOR SEMICONDUCTOR MANUFACTURING""; ""PLASMA EQUIPMENT SUPPLIER PERSPECTIVES""; ""CHIP MANUFACTURER PERSPECTIVES""; ""RECOMMENDED PRIORITIES FOR DEVELOPMENT OF AN IMPROVED DATABASE""; ""FINDINGS""; ""CONCLUSIONS""; ""REFERENCES""; ""2 Tool Scale and Feature Scale Models ""; ""INTRODUCTION""; ""TOOL SCALE MODELS"" ""Capabilities Needed for Tool Scale Models"""Barriers to Using Tool Scale Models""; ""FEATURE SCALE MODELS""; ""GENERAL ASSESSMENT OF MODELING STATE OF THE ART AND VISION OF FUTURE CAPABILITY AND IMPLIED NEEDS""; ""FINDINGS""; ""CONCLUSIONS""; ""REFERENCES""; ""3 Radiative Processes and Diagnostics ""; ""INTRODUCTION"";

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""TECHNIQUES FOR MEASUREMENTS OF GAS PHASE SPECIES"":
""Information Resources""; ""Roles of the Database In Motivating
Diagnostic Experiments"; ""SURFACE REACTION DATABASE AND
DIAGNOSTICS""; ""Information Resources""; ""New Diagnostic
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""REFERENCES"""4 Heterogeneous Processes "": ""INTRODUCTION"":
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DATABASE""; ""Approach""; ""Measurements On Realistic Plasma
Reactors""; ""Incident Flux and Desorbing Flux Analysis""; ""Condition of
the Surface""; ""Technology""; ""Ultrahigh-Vacuum Approach Using
Mass and Energy Selected Reactive Beams""; ""Particle Beams"":
""Sticking Coefficients""; ""Synergistic Effects""; ""Substrate Temperature
Dependence""; ""Angle Dependence""; ""Computer Simulations";
""FINDINGS""; ""REFERENCES""; ""5 Electron Collision Processes ""
""INTRODUCTION""""IONIZATION""; ""Atoms""; ""Molecules"";
""Theoretical Methods and Advances""; ""Neutral Dissociation"";
""ELECTRON-IMPACT EXCITATION""; ""ATTACHMENT""; ""MOMENTUM
TRANSFER, SWARM, AND DISCHARGE MEASUREMENTS"; ""GENERAL
COMMENTS""; ""FINDINGS""; ""REFERENCES""; ""6 Ion Processes, Neutral
Chemistry, And Thermochemical Data ""; ""INTRODUCTION""; ""CROSS
SECTIONS AND RATE COEFFICIENTS": ""Ion Processes"": ""Momentum
Transfer""; ""Ion-Molecule and Charge Exchange Reactions""; ""Ion-Ion
Neutralization""; ""Electron-Ion Recombination""
""Ion-Neutral and Neutral-Neutral Excitation"""Neutral Chemistry"";
""Status of the Database""; ""Excited State Chemistry and Penning
Ionization""; ""Summary""; ""Ion Processes""; ""Neutral Chemistry"";
""THERMOCHEMICAL DATA""; ""FINDINGS""; ""REFERENCES""; ""Appendix
A: Acronyms and Abbreviations""; ""Appendix B: Workshop Agenda"";
""Appendix C: Workshop Participants""
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