

CONTENTS

Introduction	ix
H. V. Boenig, U.S.A.	
Applications of Low-Temperature Plasma Technology	1
H. V. Boenig, U.S.A.	
Investigation of the Oxidation Process and the Properties of Ultrathin SiO₂ Obtained in RF Oxygen Plasma	11
E. D. Atanassova, Bulgaria	
Oxidation Processes in Plasmas	29
P. Friedel and S. Gourier, France; <i>Summary by H. V. Boenig, U.S.A.</i>	
Metal Doped Polymer Films Prepared in Low Pressure Reactive Plasmas	37
H. Biederman and L. Martinů, Czechoslovakia	
Fabrication of Membranes for Reverse Osmosis	49
K. Czejka, Austria	
Metal Nitride Film Formation in Plasmas	53
O. Matsumoto, Japan	
Plasma-Polymerized Films Sensitive to Moisture	80
N. Inagaki, Japan	
Microlenses Prepared by the Plasma-Activated Chemical Vapor Deposition Technique	92
K. Kuppers and K. H. Schelhas, Germany; U. Biermann, G. D. Khoe, and H. G. Kock, The Netherlands	
Recent Research into the Erosion of Non-Refractory Cathodes in Arc Plasma Devices	108
A. E. Guile, England	

Plasma-Hydrogenation Effects in Amorphous and Polycrystalline Silicon Films	138
S. Hasegawa, Japan	
Advances in Plasma Deposition of Thin Films: Review	
I. Plasma Chemical Vapor Deposition of Organic Thin Films	153
H. V. Boenig, U.S.A.	
II. Plasma Chemical Vapor Deposition of Inorganic Thin Films	195
H. V. Boenig, U.S.A.	
Electron Energy Distribution Functions in Thin Film Deposition Plasmas	245
A. Garscadden, U.S.A.	
Kinetics of the Methane Conversion in a Glow Discharge Up to Chemical Equilibrium	251
R. Mach and H. Drost, Germany	
Advances in Basic and Applied Aspects of Microwave Plasma Polymerization	257
M. R. Wertheimer, J. E. Klemberg-Sapieha, and H. P. Schreiber, Canada	
Metal Clusters in Plasma Polymerized Matrices. Part I: Gold	263
E. Kay, U.S.A. and M. Hecq, Belgium	
Controlling the Chemistry of a Plasma Deposited Coating for an Application to Videodiscs	273
D. L. Matthies and G. Kaganowicz, U.S.A.	
Plasma Polymerized Ethane in a Capacitively Coupled Reactor	279
A. T. Bell, U.S.A.; S. Morita, M. Shen, S. Ishibashi, K. Hida, H. Kawamura, and S. Ikeda, Japan	
Plasma Polymerized High Energy Density Dielectric Films	286
F. G. Yamagishi and L. J. Miller, U.S.A.	
Plasma-Polymerized Phenyl Isothiocyanate Films—Structure and Properties	293
G. Czeremuskin, A. M. Wróbel, and M. Kryszewski, Poland	
Radical and Ion-Molecule Reactions in a Microwave Plasma at Low Pressures	299
R. Avni, U.S.A.; U. Carmi, I. Rosenthal, and A. Inspektor, Israel	
Recent Development in Plasma Polymerized Dry Developable Electron Beam Resist	311
S. Hattori, J. Tamano, M. Ieda, and S. Morita, Japan	
Surface Fluorination of Polymers in a Glow Discharge Plasma: Photochemistry	317
R. E. Cohen, R. F. Baddour, and G. A. Corbin, U.S.A.	
Effect of Ethylene on RF Plasma Decomposition and Polymerization of Ethane in a Flow Low Pressure System	322
P. Canepa, G. Castello, and M. Nicchia, Italy	
Polymerization of a Cyclic Fluorocarbon Monomer in Low Pressure RF and MW-Plasmas	326
J. Kammermaier, G. Rittmayer, and R. Schulte, Federal Republic of Germany	
RF Sputtering of Polyimide	332
M. Kitoh, Y. Honda, and Y. Kokaku, Japan	
Some Studies on Coating of Activated Charcoal with Plasma Polymer Hexamethyldisiloxane	339
N. Hasirci and C. Akovali, Turkey	
New Polymeric Structures Synthesized Under Cold Plasma Conditions	343
C. I. Simionescu, F. Dénes, and M. Totolin, Romania	
Surface Treatment of Silicon by Plasma Polymerization of Different Organic Gases	344
F. Arefi, J. Amouroux, and M. Goldman, France	
Plasma Technology in Integrated Optics: Optical Wave Guides	350
H. V. Boenig, U.S.A.	
Reactions of Aromatic Compounds with Oxygen in a Radiofrequency Discharge	365
M. Tezuka, T. Yajima, and A. Tsuchiya, Japan	