

Contents

Part I	Diffusion at the Vacuum-Solid and Gas-Solid Interface	
<hr/>		
Surface Diffusion Measured Using Laser Induced Thermal Desorption: Hydrogen on Ru(001) By S.M. George (With 13 Figures)		2
Reflection High Energy Electron Diffraction Studies of Diffusion and Cluster Formation During Molecular Beam Epitaxy By P.R. Pukite, G.S. Petrich, G.J. Whaley, and P.I. Cohen (With 15 Figures)		19
Laser-Induced Desorption Determinations of Surface Diffusion on Rh(111) By E.G. Seebauer and L.D. Schmidt (With 3 Figures)		37
Mobility of Rare Gases Adsorbed on the (001) Surface of MgO By M. Karimi and G. Vidali (With 2 Figures)		43
Comparison of Equilibrium and Non-Equilibrium Diffusion Measurements for W(110)p(2×1)-O By M.C. Tringides, P.K. Wu, and M.G. Lagally (With 5 Figures)		53
Hopping and Diffusion By H.J. Kreuzer		63
Diffusion at the Vacuum-Solid and Gas-Solid Interface: Some Comments By J.H. Block		67

Part II	Diffusion at the Solid-Solid Interface, Surface Segregation and Bulk Diffusion	
----------------	---	--

Diffusion at Surfaces: Introductory Remarks By E. Zeitler		72
Direct Observation of Atomic Motion on Surfaces By H.-W. Fink (With 13 Figures)		75

Topography Modification and Microscopic Motion on Metal Surfaces	
By R.J. Behm (With 7 Figures)	92
Surface Self-Diffusion, Capillarity, and Surface Steps	
By J.M. Blakely and C.C. Umbach (With 5 Figures)	102
Radiation Enhanced Diffusion (RED) in a Sputtered Ag/Ni Layered System	
By D. Marton, J. Fine, and G.P. Chambers (With 3 Figures) . . .	111
The Influence of Segregation on the Formation of Cu/Ni Alloy Films by Means of Evaporation	
By B. Hofmann, D. Borgmann, and G. Wedler (With 10 Figures)	121
Surface Properties of a Lead-Tin Alloy	
By W.N. Unertl, M. Grunze, and J.J. Weimer (With 7 Figures) .	132

Part III Theoretical Models for Segregation and Diffusion

Recent Developments in the Theory of Many-Body Processes: Implications for the Study of Surface Dynamics	
By J.D. Doll, D.L. Freeman, and A.F. Voter (With 1 Figure) . . .	144
Computer Simulation of Segregation and Diffusion at Oxide Interfaces	
By P.W. Tasker and W.C. Mackrodt (With 6 Figures)	155

Part IV Nucleation at the Solid-Liquid Interface

Geometrical Structure of Adlayers on Immersed Electrodes	
By J.G. Gordon II, O.R. Melroy, and L. Blum (With 8 Figures) .	172
Electrochemical Processes in Small Systems	
By M. Fleischmann (With 28 Figures)	182
Index of Contributors	205