

Contents

Modelling of Heterogeneously Catalyzed Reactions by Cellular Automata of Dimension Between One and Two By P.J. Plath (With 20 Figures)	1
The Study of Kinetic Oscillations in the Catalytic CO-Oxidation on Single Crystal Surfaces By R. Imbihl (With 27 Figures)	26
Optimization of Heterogeneous-Catalyst Structure: Simulations and Experiments with Fractal and Non-Fractal Systems By D. Avnir, O. Citri, D. Farin, M. Ottolenghi, J. Samuel, and A. Seri-Levy (With 14 Figures)	65
Reaction Kinetics in Disordered Systems: Hierarchical Models By G. Zumofen, A. Blumen, and J. Klafter (With 8 Figures)	82
Optimization and Complexity in Molecular Biology and Physics By P. Schuster (With 9 Figures)	101
Explicit Observers By O.E. Rössler (With 4 Figures)	123
Dynamics of Networks and Pattern Processing By W. Ebeling, I. Schimansky-Geier, and Ch. Zülicke (With 13 Figures)	139
Synergetics Applied to Pattern Formation and Pattern Recognition By M. Bestehorn, R. Friedrich, A. Fuchs, H. Haken, A. Kuhn, and A. Wunderlin (With 20 Figures)	164
Index of Contributors	195