

Contents

Pattern Formation in the Developing Visual Cortex <i>S. Löwel and F. Wolf</i>	1
The Molecular Motor Actin-Myosin on a Substrate <i>A. Ott</i>	30
Force and Motion Generation of Molecular Motors: A Generic Description <i>F. Jülicher</i>	46
Reaction-Diffusion Waves of Reversible Actin Filament Assembly Drive Cell Oscillations and Locomotion <i>M.G. Vicker</i>	75
Vesicle Dynamics in Chemotaxis, Haptotaxis, and Under Shear Flow <i>I. Cantat and C. Misbah</i>	93
Chemotaxis and Aggregation in the Cellular Slime Mould <i>T. Höfer</i>	137
Calcium Waves in Rat Cardiac Myocytes Underlie the Principles of Self-Organization in Excitable Media <i>M. Wüßling and T. Mair</i>	151
Inositol 1,4,5-trisphosphate Induced Calcium Waves <i>M. Falcke</i>	164
Electrophoretic Mobility of Charged Spheres <i>T. Palberg, M. Evers, N. Garbow, and D. Hessinger</i>	191
Complex Fluids Under Shear: Block Copolymers <i>U. Wiesner</i>	214
Coherent Intramolecular Dynamics in Populations of Allosteric Enzymes <i>P. Stange, A.S. Mikhailov, and B. Hess</i>	231

Routes to Chaos in the Peroxidase-Oxidase Reaction <i>M.J.B. Hauser and L.F. Olsen</i>	252
Determination of Fokker-Planck Equations from Experimental Data Sets of Complex Systems <i>R. Friedrich, S. Siegert, and J. Peinke</i>	273
The Randomly Driven Ising Ferromagnet <i>J. Hausmann and P. Ruján</i>	282
Wave Propagation in Excitable Media with Fast Inhibitor Diffusion <i>V.S. Zykov, A.S. Mikhailov, and S.C. Müller</i>	308
Mechanisms of Spiral Breakup in Chemical and Biological Reaction-Diffusion Models <i>M. Bär, M. Falcke, and M. Or-Guil</i>	326
Experimental Realization and Control of Chemical Turing-Like Patterns <i>M. Watzl, F. Fecher, and A.F. Münster</i>	349
Reaction-Diffusion Patterns: From Observations in Halogene Chemistry to a Test for Implication in Mitosis <i>E. Dulos, A. Hunding, J. Boissonade, and P. DeKepper</i>	367

Transport and Structure

Their Competitive Roles in Biophysics and Chemistry

Müller, S.C.; Parisi, J.; Zimmermann, W. (Eds.)

1999, XIV, 400 p. 316 illus., 10 illus. in color., Hardcover

ISBN: 978-3-540-66632-5