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-- Single-ion random walk on a lattice in an attractive coulomb cutoff potential -- A model for the underpotential deposition of metals -- Oxygen diffusion in 123-YBCO -- Gating of voltage-dependent sodium channels in excitable membranes - a continuous process? -- The Schrödinger problem -- Fractal dimension and roughness of profiles and surfaces -- Competition between two kinds of entities in a Diffusion—Limited Aggregration process -- Diffusion models of internal dynamics of proteins -- IV-th max born symposium: Solid state physics I.

Sommario/riassunto

The articles in this book reflect the omnipresence of diffusion processes in the natural sciences. They describe experimental results as well as theoretical models and computer simulations, and address a wide readership including graduate students. The problems treated stem from physics, astronomy, physical chemistry, biology, and medicine. The papers are presented in a tutorial style and reflect the present-day trends in the field.