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by X-Ray Spectroscopy
15 Exciton Formation and Decay at Surfaces and Interfaces
16 Electron Dynamics at Polar Molecule-Metal Interfaces: Competition between Localization, Solvation, and Transfer; Part Four: Photoinduced Modification of Materials and Femtochemistry; 17 Theory of Femtochemistry at Metal Surfaces: Associative Molecular Photodesorption as a Case Study; 18 Time-Resolved Investigation of Electronically Induced Diffusion Processes; 19 Laser-Induced Softening of Lattice Vibrations
20 Femtosecond Time- and Angle-Resolved Photoemission as a Real-time Probe of Cooperative Effects in Correlated Electron Materials
Part Five: Recent Developments and Future Directions; 21 Time-Resolved Photoelectron Spectroscopy at Surfaces Using Femtosecond XUV Pulses; 22 Attosecond Time-Resolved Spectroscopy at Surfaces; 23 Simultaneous Spatial and Temporal Control of Nanooptical Fields; 24 Coherently Controlled Electrical Currents at Surfaces; 25 Ultrabroadband Terahertz Studies of Correlated Electrons; Index

Sommario/riassunto

This two-volume work covers ultrafast structural and electronic dynamics of elementary processes at solid surfaces and interfaces, presenting the current status of photoinduced processes. Providing valuable introductory information for newcomers to this booming field of research, it investigates concepts and experiments, femtosecond and attosecond time-resolved methods, as well as frequency domain techniques. The whole is rounded off by a look at future developments.
