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Nota di contenuto	Intro -- CONTENTS -- PLENARY -- Electron Collisions - Past Present and Future -- Collisions of Slow Highly Charged Ions with Surfaces -- Atomic Collisions Studied with "Reaction Microscopes -- Rydberg Atoms: A Microscale Laboratory for Studying Electron-Molecule Interactions -- COLLISIONS INVOLVING PHOTONS -- Quantum Control of Photochemical Reaction Dynamics and Molecular Functions -- Manipulating and Viewing Rydberg Wavepackets -- Angle-Resolved Photoelectrons as a Probe of Strong-Field Interactions -- Ultracold Rydberg Atoms in a Structured Environment -- Synchrotron-Radiation-Based Recoil Ion Momentum Spectroscopy of Laser Cooled and Trapped Cesium Atoms -- Reconstruction of Attosecond Pulse Trains -- Selective Excitation of Metastable Atomic States by Femto- and Attosecond Laser Pulses -- Accurate Calculations of Triple Differential Cross Sections for Double Photoionization of the Hydrogen Molecule -- Double and Triple Photoionization of Li and Be -- Few/Many Body Dynamics in Strong Laser Fields -- Rescattering-Induced Effects for Electron-Atom Scattering in the Presence of a Circularly Polarized Laser Field -- Multidimensional Photoelectron Spectroscopy -- Few Photon

and Strongly Driven Transitions in the XUV and Beyond -- Ionization Dynamics of Atomic Clusters in Intense Laser Pulses -- On the Second Order Autocorrelation of an XUV Attosecond Pulse Train -- Evidence for Rescattering in Molecular Dissociation -- Photoionizing Ions Using Synchrotron Radiation -- Photo Double Ionization of Fixed in Space Deuterium Molecules -- Coherence and Intramolecular Scattering in Molecular Photoionization -- Experimental Observation of Interatomic Coulombic Decay in Neon Dimers -- Ionization by Short UV Laser Pulses: Secondary ATI Peaks of the Electron Spectrum.

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Polycrystalline Diamond and Condensed Molecules -- Low Energy Spin-
Polarized Electron-Pair (e,2e)-in-Reflection from Various Surfaces --
List of Contributors.

Sommario/riassunto

This volume contains contributions covering a wide range of subjects in the area of photonic, electronic and atomic collisions. These include the collisions of heavy particles and electrons with atoms, molecules and clusters; the coherent control of reaction dynamics using lasers and electromagnetic fields with molecules, clusters and liquids; recent experimental progress in the synthesis of antihydrogen; the interaction of solar winds with cometary atmospheres, and the physical interpretation of reactions in biological systems. Contents: Angle-Resolved Photoelectrons as a Probe of Strong-Field Interactions "(M Vrakking)"Double and Triple Photoionization of Li and Be "(J Colgan et al.)"Multidimensional Photoelectron Spectroscopy "(P Lablanquie et al.)"Photoionizing Ions Using Synchrotron Radiation "(R Phaneuf)"Spin-Resolved Collisions of Electrons with Atoms and Molecules "(G F Hanne)"Electron Collisions with Trapped, Metastable Helium "(L J Uhlmann et al.)"Electron Driven Processes in Atmospheric Behavior "(L Campbell et al.)"Atomic Collisions Involving Positrons "(H R J Walters & C Starret)"Molecular Effects in Neutrino Mass Measurements "(N Doss et al.)"Atom-Diatom Collisions at Cold and Ultra-Cold Temperatures "(F D Colavecchia et al.)"Crystal Assisted Atomic Physics Experiments Using Heavy Ions "(K Komaki)"Fragmentation of Collisionally Excited Fullerenes "(M Alcami et al.)"Fragmentation of Small Carbon Clusters "(M Chabot et al.)"and other papers Readership: Researchers and post-graduate students in atomic, molecular and optical physics.