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Na<sub>2</sub>; COHERENT CONTROL OF BIMOLECULAR SCATTERING; LASER HEATING, COOLING, AND TRANSPARENCY OF INTERNAL DEGREES OF FREEDOM OF MOLECULES; RAMIFICATIONS OF FEEDBACK FOR CONTROL OF QUANTUM DYNAMICS; THEORY OF LASER CONTROL OF VIBRATIONAL TRANSITIONS AND CHEMICAL REACTIONS BY ULTRASHORT INFRARED LASER PULSES  
TIME-FREQUENCY AND COORDINATE-MOMENTUM WIGNER  
WAVEPACKETS IN NONLINEAR SPECTROSCOPY  
GENERAL DISCUSSION ON LASER CONTROL OF CHEMICAL REACTIONS; INTRAMOLECULAR DYNAMICS; SOLVENT DYNAMICS AND RRKM THEORY OF CLUSTERS; HIGH-RESOLUTION SPECTROSCOPY AND INTRAMOLECULAR DYNAMICS; GENERAL DISCUSSION ON INTRAMOLECULAR DYNAMICS; REGULAR AND IRREGULAR FEATURES IN UNIMOLECULAR SPECTRA AND DYNAMICS; INTRAMOLECULAR DYNAMICS IN THE FREQUENCY DOMAIN; EMERGENCE OF CLASSICAL PERIODIC ORBITS AND CHAOS IN INTRAMOLECULAR AND DISSOCIATION DYNAMICS  
GENERAL DISCUSSION ON REGULAR AND IRREGULAR FEATURES IN UNIMOLECULAR SPECTRA AND DYNAMICS  
MOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY; ZEKE SPECTROSCOPY; SEPARATION OF TIME SCALES IN THE DYNAMICS OF HIGH MOLECULAR RYDBERG STATES; GENERAL DISCUSSION ON MOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY: PART I; FROM RYDBERG STATE DYNAMICS TO ION-MOLECULE REACTIONS USING ZEKE SPECTROSCOPY; QUANTUM DEFECT THEORY OF THE DYNAMICS OF MOLECULAR RYDBERG STATES; SUBPICOSECOND STUDY OF BUBBLE FORMATION UPON RYDBERG STATE EXCITATION IN CONDENSED RARE GASES  
GENERAL DISCUSSION ON MOLECULAR RYDBERG STATES AND ZEKE SPECTROSCOPY: PART II  
TRANSITION-STATE SPECTROSCOPY AND PHOTODISSOCIATION; PHOTODISSOCIATION SPECTROSCOPY AND DYNAMICS OF THE VINOXY (CH<sub>2</sub>CHO) RADICAL; RESONANCES IN UNIMOLECULAR DISSOCIATION: FROM MODE-SPECIFIC TO STATISTICAL BEHAVIOR; PHOTODISSOCIATING SMALL POLYATOMIC MOLECULES IN THE VUV REGION; RESONANCES IN THE 1E+ - 1E+ BAND OF OCS; PHASE AND AMPLITUDE IMAGING OF EVOLVING WAVEPACKETS BY SPECTROSCOPIC MEANS; GENERAL DISCUSSION ON TRANSITION-STATE SPECTROSCOPY AND PHOTODISSOCIATION; REACTION RATE THEORIES  
RECENT ADVANCES IN STATISTICAL ADIABATIC CHANNEL  
CALCULATIONS OF STATE-SPECIFIC DISSOCIATION DYNAMICS

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#### Sommario/riassunto

Continuing the tradition of the *Advances in Chemical Physics* series, Volume 101: *Chemical Reactions and Their Control on the Femtosecond Time Scale* details the extraordinary findings reported at the XXth Solvay Conference on Chemistry, held at the Universite Libre de Bruxelles, Belgium, from November 28 to December 2, 1995. This new volume discusses the remarkable opportunities afforded by the femtosecond laser, focusing on the host of phenomena this laser has made it possible to observe. Examining molecules on the intrinsic time scale of their vibrations as well as their dissociative motions

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