

1. Record Nr.	UNINA9910830353803321
Titolo	Chemical reactions and their control on the femtosecond time scale [[electronic resource]] : XXth Solvay Conference on Chemistry / / edited by Pierre Gaspard and Irene Burghardt
Pubbl/distr/stampa	New York, : Wiley, c1997
ISBN	1-282-68198-2 9786612681981 0-470-14160-3 0-470-14213-8
Descrizione fisica	1 online resource (984 p.)
Collana	Advances in chemical physics ; ; v. 101
Altri autori (Persone)	GaspardPierre <1959-> Burghardtlrene
Disciplina	541.305 541.39 541/.08
Soggetti	Chemical kinetics Chemical reactions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"An Interscience publication."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Advances in CHEMICAL PHYSICS; CONTENTS; OPENING REMARKS; FEMTOCHEMISTRY: FROM ISOLATED MOLECULES TO CLUSTERS; FEMTOCHEMISTRY: CHEMICAL REACTION DYNAMICS AND THEIR CONTROL; COHERENT CONTROL WITH FEMTOSECOND LASER PULSES; GENERAL DISCUSSION ON FEMTOCHEMISTRY: FROM ISOLATED MOLECULES TO CLUSTERS; FEMTOCHEMISTRY: FROM CLUSTERS TO SOLUTIONS; SIZE-DEPENDENT ULTRAFAST RELAXATION PHENOMENA IN METAL CLUSTERS; FEMTOSECOND CHEMICAL DYNAMICS IN CONDENSED PHASES; FEMTOSECOND LASER CONTROL OF ELECTRON BEAMS FOR ULTRAFAST DIFFRACTION; GENERAL DISCUSSION ON FEMTOCHEMISTRY: FROM CLUSTERS TO SOLUTIONS LASER CONTROL OF CHEMICAL REACTIONSPERSPECTIVES ON THE CONTROL OF QUANTUM MANY-BODY DYNAMICS: APPLICATION TO CHEMICAL REACTIONS; EXPERIMENTAL OBSERVATION OF LASER CONTROL: ELECTRONIC BRANCHING IN THE PHOTODISSOCIATION OF

Na₂; 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 (CH₂CHO) 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 THEOREMS
 RECENT ADVANCES IN STATISTICAL ADIABATIC CHANNEL
 CALCULATIONS OF STATE-SPECIFIC DISSOCIATION DYNAMICS

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