

1. Record Nr.	UNINA9911019505303321
Titolo	Chemical reactions and their control on the femtosecond time scale : XXth Solvay Conference on Chemistry // edited by Pierre Gaspard and Irene Burghardt
Pubbl/distr/stampa	New York, : Wiley, c1997
ISBN	9786612681981 9781282681989 1282681982 9780470141601 0470141603 9780470142134 0470142138
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 REACTIONS
PERSPECTIVES 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
