1. Record Nr. UNINA9910789939003321

Titolo	Atomic and molecular nonlinear optics [[electronic resource]] : theory, experiment and computation : a homage to the pioneering work of Stanisaw Kielich (1925-1993) / / edited by George Maroulis ... [et al.]
Pubbl/distr/stampa	Amsterdam ; ; Washington, D.C., : IOS Press, c2011
ISBN	6613556378 1-280-37846-8 9786613556370 1-60750-742-0
Descrizione fisica	1 online resource (544 p.)
Altri autori (Persone)	MaroulisGeorge
Disciplina	539.12 541.224
Soggetti	Nonlinear optics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Title Page; About the Editors; Contents; Memories to Stanislaw Kielich: My Teacher, My Mentor and My Friend; Stanislaw Kielich - A Personal Memoir; My Memories of Stanislaw Kielich; To the Memory of Stanislas Kielich; Working with Professor Stanislaw Kielich; On the Quantization of the Potential Amplitude in the Schrodinger Equation; Irreducible Spherical Representation of some Fourth-Rank Tensors; Theoretical Study of the Electronic Structure of the Alkaline Earth BeLi2+ ion; Exploring NLO Response of 9,10-Donor-Acceptor Substituted Bichromophoric Anthracene Derivatives Asymptotic Model of Exchange Interactions for Polarizability Calculation of van der Waals Complexes Anomalous Diffusion in Dielectric Relaxation of Polyelectrolytes; Isophlorin Derivatives: Structures and Materials for n-Channel Organic Semiconductors; Enhanced First Hyperpolarizability of Donor-Acceptor Diethynylsilane Oligomers; Sum Frequency Generation in Chiral Carbon Nanotubes; Gaussian Basis Sets for Ab Initio Calculation of NLO Properties of Polyatomic Molecules; Quadrupole Polarizabilities of the Rare-Gas Homonuclear Diatoms and Methane Molecules

Sudden Birth and Sudden Death of Entanglement Two-photon-Excitation Fluorescence Depolarization in Solutions and Nano-Scale-Organized (Macro)Molecular Media: Application of the Wide-Angular Detection-Aperture Technique; Molecular Dynamics Calculation of Infra-Red Spectra of Ultra-Dispersed Atmospheric Moisture; Linear Dielectric Relaxation of Dipolar, Rigid, Non-Interacting and Asymmetric-Top Molecules in Smoluchowski-Debye Approach; Intermolecular Covalent Interaction: 20-Center-2-Electron Covalent pi/pi Bonding in Tetrathiafulvalene Radical-Cation Dimer TTF.+-TTF.+ The Anisotropic Polarizability of Pairs of Hydrogen Molecules and the Depolarized Collision-Induced Roto-Translational Raman Light Scattering Spectra Stimulated Thermal Scattering Induced by Two-Photon Absorption and Experimental Observation of Genuine Stimulated Brillouin Scattering in the Near-Ultraviolet Region; Modulation of Stimulated Brillouin Scattering and Stimulated Temperature Scattering Spectral Components by two-Photon Heating; Exciting Field Phase Effect on the Entanglement Death and Birth Phenomena for Nonlinear Coupler System
Temperature Effect on the Optical Spectra of Iron (III) Metal Complexes Exhibiting Spin Crossover and Potential Nonlinear Optical Properties Dynamics of Collapse of Optical Pulses in Kerr Medium; Elongation-CIS Method: Describing Excited States of Large Molecular Systems in Regionally Localized Molecular Orbital Basis; On Magnet c Field of Ring Current; Nonlinear Optical Properties of Solvated Molecules; Paradoxes of Measures of Quantum Entanglement and Bell's Inequality Violation in Two-Qubit Systems
Comparative Study between ONIOM, Ab Initio and DFT Methods, Application: alpha and beta L-Fucopyranose

Sommario/riassunto

The papers collected in this volume in honor of the late Stanislaw Kielich cover an impressive range of modern subjects in molecular science. These subjects include, among others, the nonlinear optics of molecules, new approaches to the electronic structure of large molecules, the properties of carbon nanotubes, fluorescence polarization spectroscopy, computational studies of systems of fundamental interest to collision-induced spectroscopy, the simulation of fluids, NLO materials, chemical bonding in complex molecules, the NLO properties of functionalized DNA and the magnetic properties of mo