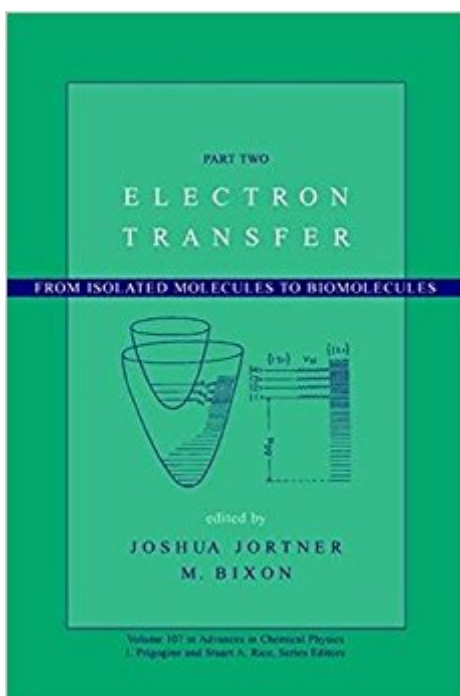


The book was found

Electron Transfer: From Isolated Molecules To Biomolecules, Part 2 (Advances In Chemical Physics)



Synopsis

an integrated approach to electron transfer phenomena This two-part stand-alone volume in the prestigious *Advances in Chemical Physics* series provides the most comprehensive overview of electron transfer science today. It draws on cutting-edge research from diverse areas of chemistry, physics, and biology-covering the most recent developments in the field, and pointing to important future trends. This second volume offers the following sections: * Solvent control, including ultrafast solvation dynamics and related topics * Ultrafast electron transfer and coherence effects * Molecular electronics * Electron transfer and exciplex chemistry * Biomolecules-from electron transfer tubes to kinetics in a DNA environment Part One addresses the historical perspective, electron transfer phenomena in isolated molecules and clusters, general theory, and electron transfer kinetics in bridged compounds. Electron transfer science has seen tremendous progress in recent years. Technological innovations, most notably the advent of femtosecond lasers, now permit the real-time investigation of intramolecular and intermolecular electron transfer processes on a time scale of nuclear motion. New scientific information abounds, illuminating the processes of energy acquisition, storage, and disposal in large molecules, clusters, condensed phase, and biophysical systems. *Electron Transfer: From Isolated Molecules to Biomolecules* is the first book devoted to the exciting work being done in nonradiative electron transfer dynamics today. This two-part edited volume emphasizes the interdisciplinary nature of the field, bringing together the contributions of pioneers in chemistry, physics, and biology. Both theoretical and experimental topics are featured. The authors describe modern approaches to the exploration of different systems, including supersonic beam techniques, femtosecond laser spectroscopy, chemical syntheses, and methods in genetic and chemical engineering. They examine applications in such areas as supersonic jets, solvents, electrodes, semi- conductors, respiratory and enzymatic protein systems, photosynthesis, and more. They also relate electron transfer and radiationless transitions theory to pertinent physical phenomena, and provide a conceptual framework for the different processes. Complete with over two hundred illustrations, Part Two opens with solvent control issues, including electron transfer reactions and ultrafast solvation dynamics. Other topics include ultrafast electron transfer and coherence effects, molecular electronics, and electron transfer in exciplex chemistry. This volume concludes with a section on biomolecules-from electron transfer tubes to experimental electron transfer and transport in DNA. Timely, comprehensive, and authoritative, *Electron Transfer: From Isolated Molecules to Biomolecules* is an essential resource for physical chemists, molecular physicists, and researchers working in nonradiative dynamics today.

Book Information

Series: Advances in Chemical Physics (Book 123)

Hardcover: 735 pages

Publisher: Wiley-Interscience; 1 edition (January 25, 1999)

Language: English

ISBN-10: 0471252913

ISBN-13: 978-0471252917

Product Dimensions: 6.3 x 1.6 x 9.2 inches

Shipping Weight: 2.8 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #6,025,907 in Books (See Top 100 in Books) #85 in Books > Science & Math > Chemistry > Chemical Physics #996 in Books > Science & Math > Physics > Nuclear Physics > Atomic & Nuclear Physics #3369 in Books > Science & Math > Chemistry > Industrial & Technical

Customer Reviews

Electron transfer science has seen tremendous progress in recent years. Technological innovations, most notably the advent of femtosecond lasers, now permit the real-time investigation of intramolecular and intermolecular electron transfer processes on a time scale of nuclear motion. New scientific information abounds, illuminating the processes of energy acquisition, storage, and disposal in large molecules, clusters, condensed phase, and biophysical systems. *Electron Transfer: From Isolated Molecules to Biomolecules* is the first book devoted to the exciting work being done in nonradiative electron transfer dynamics today. This two-part edited volume emphasizes the interdisciplinary nature of the field, bringing together the contributions of pioneers in chemistry, physics, and biology. Both theoretical and experimental topics are featured. The authors describe modern approaches to the exploration of different systems, including supersonic beam techniques, femtosecond laser spectroscopy, chemical syntheses, and methods in genetic and chemical engineering. They examine applications in such areas as supersonic jets, solvents, electrodes, semiconductors, respiratory and enzymatic protein systems, photosynthesis, and more. They also relate electron transfer and radiationless transitions theory to pertinent physical phenomena, and provide a conceptual framework for the different processes. Complete with over two hundred illustrations, Part Two opens with solvent control issues, including electron transfer reactions and ultrafast solvation dynamics. Other topics include ultrafast electron transfer and coherence effects, molecular electronics, and electron transfer in exciplex chemistry. This volume

concludes with a section on biomolecules-from electron transfer tubes to experimental electron transfer and transport in DNA. Timely, comprehensive, and authoritative, *Electron Transfer: From Isolated Molecules to Biomolecules* is an essential resource for physical chemists, molecular physicists, and researchers working in nonradiative dynamics today.

an integrated approach to electron transfer phenomena This two-part stand-alone volume in the prestigious *Advances in Chemical Physics* series provides the most comprehensive overview of electron transfer science today. It draws on cutting-edge research from diverse areas of chemistry, physics, and biology-covering the most recent developments in the field, and pointing to important future trends. This second volume offers the following sections: * Solvent control, including ultrafast solvation dynamics and related topics * Ultrafast electron transfer and coherence effects * Molecular electronics * Electron transfer and exciplex chemistry * Biomolecules-from electron transfer tubes to kinetics in a DNA environment Part One addresses the historical perspective, electron transfer phenomena in isolated molecules and clusters, general theory, and electron transfer kinetics in bridged compounds. Electron transfer science has seen tremendous progress in recent years. Technological innovations, most notably the advent of femtosecond lasers, now permit the real-time investigation of intramolecular and intermolecular electron transfer processes on a time scale of nuclear motion. New scientific information abounds, illuminating the processes of energy acquisition, storage, and disposal in large molecules, clusters, condensed phase, and biophysical systems. *Electron Transfer: From Isolated Molecules to Biomolecules* is the first book devoted to the exciting work being done in nonradiative electron transfer dynamics today. This two-part edited volume emphasizes the interdisciplinary nature of the field, bringing together the contributions of pioneers in chemistry, physics, and biology. Both theoretical and experimental topics are featured. The authors describe modern approaches to the exploration of different systems, including supersonic beam techniques, femtosecond laser spectroscopy, chemical syntheses, and methods in genetic and chemical engineering. They examine applications in such areas as supersonic jets, solvents, electrodes, semi- conductors, respiratory and enzymatic protein systems, photosynthesis, and more. They also relate electron transfer and radiationless transitions theory to pertinent physical phenomena, and provide a conceptual framework for the different processes. Complete with over two hundred illustrations, Part Two opens with solvent control issues, including electron transfer reactions and ultrafast solvation dynamics. Other topics include ultrafast electron transfer and coherence effects, molecular electronics, and electron transfer in exciplex chemistry. This volume concludes with a section on biomolecules-from electron transfer tubes to experimental electron

transfer and transport in DNA. Timely, comprehensive, and authoritative, *Electron Transfer: From Isolated Molecules to Biomolecules* is an essential resource for physical chemists, molecular physicists, and researchers working in nonradiative dynamics today.

[Download to continue reading...](#)

Electron Transfer: From Isolated Molecules to Biomolecules, Part 2 (Advances in Chemical Physics)
Atoms, Molecules and Optical Physics 2: Molecules and Photons - Spectroscopy and Collisions
(Graduate Texts in Physics) *Electron microscopy for beginners: Easy course for understanding and doing electron microscopy* (Electron microscopy in Science) *Advances in Chemical Physics*,
Volume 15: Stochastic Processes in Chemical Physics (v. 15) *Recent Advances in the Theory of Chemical and Physical Systems: Proceedings of the 9th European Workshop on Quantum Systems in Chemistry and Physics ... in Theoretical Chemistry and Physics* *Ab Initio Methods in Quantum Chemistry*, Part 1 (Advances in Chemical Physics) *Advances in Chemical Physics: Modern Nonlinear Optics*, Volume 119, Part 2, 2nd Edition *Advances in Chemical Physics: Modern Nonlinear Optics*, Volume 119, Part 1, 2nd Edition *Advances in Chemical Physics: Modern Nonlinear Optics*, Volume 119, Part 3, 2nd Edition *Chemical Physics of Free Molecules* *Advances in Imaging and Electron Physics*, Volume 157: *Optics of Charged Particle Analyzers* *Molecules of Murder: Criminal Molecules and Classic Cases* *Three-Dimensional Electron Microscopy of Macromolecular Assemblies: Visualization of Biological Molecules in Their Native State* *Atoms, Molecules and Optical Physics 1: Atoms and Spectroscopy* (Graduate Texts in Physics) *Electron Microprobe Analysis and Scanning Electron Microscopy in Geology* *Scanning Electron Microscopy, X-Ray Microanalysis, and Analytical Electron Microscopy: A Laboratory Workbook* *Electron Diffraction in the Transmission Electron Microscope* (Microscopy Handbooks) *Biophysics of Electron Transfer and Molecular Bioelectronics* (Electronics and Biotechnology Advanced (Elba) Forum Series) *Art Nouveau Alphabet Iron-On Transfer Patterns: 13 Authentic Art Nouveau Fonts* (Dover Iron-On Transfer Patterns) *Elegant Medieval Iron-On Transfer Patterns* (Dover Iron-On Transfer Patterns)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)