# Shaul Mukamel

List of Publications by Year
in descending order

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| | | 2671 | 7511 |
|---|---|---|---|
| 741 | 35,730 | 95 | 151 |
| papers | citations | h-index | g-index |

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|---|---|---|---|
| 744 | 744 | 744 | 13316 |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Nonequilibrium fluctuations, fluctuation theorems, and counting statistics in quantum systems. Reviews of Modern Physics, 2009, 81, 1665-1702. | 16.4 | 1,067 |
| 2 | MULTIDIMENSIONALFEMTOSECONDCORRELATIONSPECTROSCOPIES OFELECTRONIC ANDVIBRATIONALEXCITATIONS. Annual Review of Physical Chemistry, 2000, 51, 691-729. | 4.8 | 796 |
| 3 | Twoâ€dimensional femtosecond vibrational spectroscopy of liquids. Journal of Chemical Physics, 1993, 99, 9496-9511. | 1.2 | 559 |
| 4 | Density Matrix Analysis and Simulation of Electronic Excitations in Conjugated and Aggregated Molecules. Chemical Reviews, 2002, 102, 3171-3212. | 23.0 | 519 |
| 5 | Using coherence to enhance function in chemical and biophysical systems. Nature, 2017, 543, 647-656. | 13.7 | 477 |
| 6 | Coherent Multidimensional Optical Spectroscopy of Excitons in Molecular Aggregates; Quasiparticle versus Supermolecule Perspectives. Chemical Reviews, 2009, 109, 2350-2408. | 23.0 | 446 |
| 7 | Exciton-migration and three-pulse femtosecond optical spectroscopies of photosynthetic antenna complexes. Journal of Chemical Physics, 1998, 108, 7763-7774. | 1.2 | 380 |
| 8 | Electronic Coherence and Collective Optical Excitations of Conjugated Molecules. Science, 1997, 277, 781-787. | 6.0 | 345 |
| 9 | Experimental Determination of the Quantum-Mechanical State of a Molecular Vibrational Mode Using Fluorescence Tomography. Physical Review Letters, 1995, 74, 884-887. | 2.9 | 294 |
| 10 | Nonlinear susceptibilities of molecular aggregates: Enhancement ofÏ‡(3)by size. Physical Review A, 1989, 40, 5783-5801. | 1.0 | 270 |
| 11 | Superradiance in molecular aggregates. Journal of Chemical Physics, 1989, 91, 683-700. | 1.2 | 260 |
| 12 | Femtosecond Optical Spectroscopy: A Direct Look at Elementary Chemical Events. Annual Review of Physical Chemistry, 1990, 41, 647-681. | 4.8 | 257 |
| 13 | Many-Body Approaches for Simulating Coherent Nonlinear Spectroscopies of Electronic and Vibrational Excitons. Chemical Reviews, 2004, 104, 2073-2098. | 23.0 | 256 |
| 14 | Dielectric friction and the transition from adiabatic to nonadiabatic electron transfer. I. Solvation dynamics in Liouville space. Journal of Chemical Physics, 1988, 88, 3263-3280. | 1.2 | 250 |
| 15 | Collisionless Multiphoton Dissociation of SF6: A Statistical Thermodynamic Process. Physical Review Letters, 1977, 38, 1131-1134. | 2.9 | 249 |
| 16 | Offâ€resonant transient birefringence in liquids. Journal of Chemical Physics, 1993, 99, 2410-2428. | 1.2 | 248 |
| 17 | Roadmap of ultrafast x-ray atomic and molecular physics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 032003. | 0.6 | 240 |
| 18 | Photosynthetic reaction center as a quantum heat engine. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2746-2751. | 3.3 | 234 |

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|---|---|---|---|
| 19 | Nonlinear optical signals and spectroscopy with quantum light. Reviews of Modern Physics, 2016, 88, . | 16.4 | 234 |
| 20 | Quantum Extension of the Jarzynski Relation: Analogy with Stochastic Dephasing. Physical Review Letters, 2003, 90, 170604. | 2.9 | 233 |
| 21 | Femtosecond pump-probe spectroscopy of polyatomic molecules in condensed phases. Physical Review A, 1990, 41, 6485-6504. | 1.0 | 224 |
| 22 | Energy gap law for vibrational relaxation of a molecule in a dense medium. Journal of Chemical Physics, 1975, 63, 200-207. | 1.2 | 221 |
| 23 | Nonlinear optics of semiconductor and molecular nanostructures; a common perspective. Reviews of Modern Physics, 1998, 70, 145-174. | 16.4 | 221 |
| 24 | Some features of vibrational relaxation of a diatomic molecule in a dense medium. Journal of Chemical Physics, 1974, 60, 3929-3934. | 1.2 | 219 |
| 25 | Stilbenoid Dimers:â€‰ Dissection of a Paracyclophane Chromophore. Journal of the American Chemical Society, 1998, 120, 9188-9204. | 6.6 | 214 |
| 26 | Through-Space Charge Transfer and Nonlinear Optical Properties of Substituted Paracyclophane. Journal of the American Chemical Society, 2000, 122, 11956-11962. | 6.6 | 207 |
| 27 | Direct evidence of quantum transport in photosynthetic light-harvesting complexes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20908-20912. | 3.3 | 203 |
| 28 | Two-Dimensional Raman Spectroscopy of Vibrational Interactions in Liquids. Physical Review Letters, 1997, 79, 2702-2705. | 2.9 | 200 |
| 29 | Localized Electronic Excitations in Phenylacetylene Dendrimers. Journal of Physical Chemistry B, 1998, 102, 3310-3315. | 1.2 | 198 |
| 30 | Timeâ€resolved fluorescence and holeâ€burning line shapes of solvated molecules: Longitudinal dielectric relaxation and vibrational dynamics. Journal of Chemical Physics, 1987, 87, 5840-5857. | 1.2 | 191 |
| 31 | Optical control of molecular dynamics: Molecular cannons, reflectrons, and waveâ€packet focusers. Journal of Chemical Physics, 1993, 99, 6562-6578. | 1.2 | 190 |
| 32 | Polarons, localization, and excitonic coherence in superradiance of biological antenna complexes. Journal of Chemical Physics, 1997, 107, 3876-3893. | 1.2 | 190 |
| 33 | Multiple Exciton Coherence Sizes in Photosynthetic Antenna Complexes viewed by Pumpâ^'Probe Spectroscopy. Journal of Physical Chemistry B, 1997, 101, 7332-7342. | 1.2 | 188 |
| 34 | Density-matrix representation of nonadiabatic couplings in time-dependent density functional (TDDFT) theories. Journal of Chemical Physics, 2000, 112, 3572-3579. | 1.2 | 183 |
| 35 | Temperature-dependent superradiant decay of excitons in small aggregates. Physical Review Letters, 1990, 65, 211-214. | 2.9 | 182 |
| 36 | Electronic dephasing, vibrational relaxation, and solvent friction in molecular nonlinear optical line shapes. Journal of Chemical Physics, 1988, 89, 5160-5176. | 1.2 | 180 |

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| 37 | Electrostatic DFT Map for the Complete Vibrational Amide Band of NMA. Journal of Physical Chemistry A, 2005, 109, 9747-9759. | 1.1 | 180 |
| 38 | Selectivity in coherent transient Raman measurements of vibrational dephasing in liquids. Journal of Chemical Physics, 1985, 83, 2116-2128. | 1.2 | 177 |
| 39 | Eigenstateâ€free, Green function, calculation of molecular absorption and fluorescence line shapes. Journal of Chemical Physics, 1986, 85, 5908-5923. | 1.2 | 171 |
| 40 | Multidimensional Attosecond Resonant X-Ray Spectroscopy of Molecules: Lessons from the Optical Regime. Annual Review of Physical Chemistry, 2013, 64, 101-127. | 4.8 | 170 |
| 41 | Vibrational Sum-Frequency Generation Spectroscopy at the Water/Lipid Interface: Molecular Dynamics Simulation Study. Journal of the American Chemical Society, 2010, 132, 6434-6442. | 6.6 | 167 |
| 42 | Optical multidimensional coherent spectroscopy. Physics Today, 2013, 66, 44-49. | 0.3 | 167 |
| 43 | Simulation of the intermolecular vibrational spectra of liquid water and water clusters. Journal of Chemical Physics, 1993, 98, 4413-4421. | 1.2 | 165 |
| 44 | Photon echoes of polyatomic molecules in condensed phases. Journal of Chemical Physics, 1991, 94, 179-190. | 1.2 | 159 |
| 45 | Cavity Femtochemistry: Manipulating Nonadiabatic Dynamics at Avoided Crossings. Journal of Physical Chemistry Letters, 2016, 7, 2050-2054. | 2.1 | 158 |
| 46 | Multidimensional femtosecond correlation spectroscopies of electronic and vibrational excitons. Journal of Chemical Physics, 1999, 110, 5011-5028. | 1.2 | 155 |
| 47 | Vibrational relaxation in jetâ€cooled alkyl benzenes. II. Fluorescence spectra. Journal of Chemical Physics, 1980, 72, 5049-5061. | 1.2 | 154 |
| 48 | Coherent Multidimensional Vibrational Spectroscopy of Biomolecules: Concepts, Simulations, and Challenges. Angewandte Chemie - International Edition, 2009, 48, 3750-3781. | 7.2 | 152 |
| 49 | Multiphoton molecular dissociation in intense laser fields. Journal of Chemical Physics, 1976, 65, 5204-5225. | 1.2 | 149 |
| 50 | Efficient Fluoride-Selective Fluorescent Host:Â Experiment and Theoryâ€. Journal of Organic Chemistry, 2004, 69, 943-950. | 1.7 | 146 |
| 51 | Collisional broadening of spectral line shapes in two-photon and multiphoton processes. Physics Reports, 1982, 93, 1-60. | 10.3 | 145 |
| 52 | Photon echoes and related fourâ€waveâ€mixing spectroscopies using phaseâ€locked pulses. Journal of Chemical Physics, 1992, 96, 5618-5629. | 1.2 | 145 |
| 53 | Two-Dimensional Raman Echoes:â€‰ Femtosecond View of Molecular Structure and Vibrational Coherence. Accounts of Chemical Research, 1999, 32, 145-154. | 7.6 | 144 |
| 54 | Collective Solvent Coordinates for the Infrared Spectrum of HOD in D2O Based on an ab Initio Electrostatic Map. Journal of Physical Chemistry A, 2005, 109, 64-82. | 1.1 | 142 |

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| 55 | Coherent low-frequency motions of hydrogen bonded acetic acid dimers in the liquid phase. Journal of Chemical Physics, 2004, 121, 902-913. | 1.2 | 138 |
| 56 | Statistical reduction for strongly driven simple quantum systems. Physical Review A, 1978, 17, 1988-1998. | 1.0 | 137 |
| 57 | Simulation Protocols for Coherent Femtosecond Vibrational Spectra of Peptides. Journal of Physical Chemistry B, 2006, 110, 3362-3374. | 1.2 | 135 |
| 58 | Theory of vibrational overtone line shapes of polyatomic molecules. Journal of Chemical Physics, 1979, 70, 463. | 1.2 | 132 |
| 59 | Bacteriochlorophyll and Carotenoid Excitonic Couplings in the LH2 System of Purple Bacteria. Journal of Physical Chemistry B, 2000, 104, 9540-9553. | 1.2 | 127 |
| 60 | Catching Conical Intersections in the Act: Monitoring Transient Electronic Coherences by Attosecond Stimulated X-Ray Raman Signals. Physical Review Letters, 2015, 115, 193003. | 2.9 | 127 |
| 61 | Non-markovian theory of molecular relaxation. I. Vibrational relaxation and dephasing in condensed phases. Chemical Physics, 1979, 37, 33-47. | 0.9 | 126 |
| 62 | Multidimensional femtosecond spectroscopies of molecular aggregates and semiconductor nanostructures: The nonlinear exciton equations. Journal of Chemical Physics, 1998, 109, 9587-9601. | 1.2 | 124 |
| 63 | Cooperative nonlinear optical response of molecular aggregates: Crossover to bulk behavior. Physical Review Letters, 1991, 66, 1197-1200. | 2.9 | 123 |
| 64 | Two-Dimensional Real-Space Analysis of Optical Excitations in Acceptor-Substituted Carotenoids. Journal of the American Chemical Society, 1997, 119, 11408-11419. | 6.6 | 123 |
| 65 | Nonimpact unified theory of four-wave mixing and two-photon processes. Physical Review A, 1983, 28, 3480-3492. | 1.0 | 122 |
| 66 | The Brownian oscillator model for solvation effects in spontaneous light emission and their relationship to electron transfer. Journal of the American Chemical Society, 1994, 116, 11039-11047. | 6.6 | 121 |
| 67 | Non-adiabatic dynamics of molecules in optical cavities. Journal of Chemical Physics, 2016, 144, 054309. | 1.2 | 121 |
| 68 | Molecular theory of solvation and dielectric response in polar fluids. Journal of Chemical Physics, 1987, 87, 1272-1283. | 1.2 | 120 |
| 69 | Tunneling versus sequential longâ€range electron transfer: Analogy with pumpâ€“probe spectroscopy. Journal of Chemical Physics, 1989, 91, 6973-6988. | 1.2 | 120 |
| 70 | Intermolecular forces, spontaneous emission, and superradiance in a dielectric medium: Polariton-mediated interactions. Physical Review A, 1989, 40, 7065-7080. | 1.0 | 119 |
| 71 | Real-time path-integral approach to quantum coherence and dephasing in nonadiabatic transitions and nonlinear optical response. Physical Review E, 1993, 47, 118-136. | 0.8 | 119 |
| 72 | A model for isotope separation via molecular multiphoton photodissociation. Chemical Physics Letters, 1976, 40, 150-156. | 1.2 | 118 |

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| 73 | Oligophenylenevinylene Phane Dimers:Â Probing the Effect of Contact Site on the Optical Properties of Bichromophoric Pairs. Journal of the American Chemical Society, 2000, 122, 1289-1297. | 6.6 | 116 |
| 74 | Two-Quantum Many-Body Coherences in Two-Dimensional Fourier-Transform Spectra of Exciton Resonances in Semiconductor Quantum Wells. Physical Review Letters, 2010, 104, 117401. | 2.9 | 115 |
| 75 | Exciton Hamiltonian for the Bacteriochlorophyll System in the LH2 Antenna Complex of Purple Bacteria. Journal of Physical Chemistry B, 2000, 104, 4519-4528. | 1.2 | 114 |
| 76 | Exciton Delocalization in the B850 Light-Harvesting Complex:Â Comparison of Different Measures. Journal of Physical Chemistry B, 2001, 105, 5515-5524. | 1.2 | 114 |
| 77 | Collective coordinates for nuclear spectral densities in energy transfer and femtosecond spectroscopy of molecular aggregates. Journal of Chemical Physics, 1996, 105, 4565-4583. | 1.2 | 113 |
| 78 | The origin of vibrational mode couplings in various secondary structural motifs of polypeptides. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 506-510. | 3.3 | 113 |
| 79 | Two-Dimensional Electronic Double-Quantum Coherence Spectroscopy. Accounts of Chemical Research, 2009, 42, 1375-1384. | 7.6 | 113 |
| 80 | Raman excitation profiles of polyatomic molecules in condensed phases. A stochastic theory. Journal of Chemical Physics, 1986, 85, 462-474. | 1.2 | 112 |
| 81 | Three-Dimensional Nonlinear Optical Chromophores Based on Through-Space Delocalization. Journal of the American Chemical Society, 2002, 124, 13480-13485. | 6.6 | 112 |
| 82 | On the semiclassical calculation of molecular absorption and fluorescence spectra. Journal of Chemical Physics, 1982, 77, 173-181. | 1.2 | 111 |
| 83 | Radiative decay and energy transfer in molecular aggregates: The role of intermolecular dephasing. Physical Review A, 1988, 37, 3835-3846. | 1.0 | 111 |
| 84 | Classical chaos and fluctuation-dissipation relations for nonlinear response. Physical Review E, 1996, 53, R1-R4. | 0.8 | 109 |
| 85 | Solvent Reorganization in Long-Range Electron Transfer:Â Density Matrix Approach. Journal of Physical Chemistry A, 1998, 102, 1241-1251. | 1.1 | 108 |
| 86 | Simulating Coherent Multidimensional Spectroscopy of Nonadiabatic Molecular Processes: From the Infrared to the X-ray Regime. Chemical Reviews, 2017, 117, 12165-12226. | 23.0 | 107 |
| 87 | Cooperative radiative dynamics in molecular aggregates. Journal of Chemical Physics, 1991, 94, 7534-7544. | 1.2 | 106 |
| 88 | Lindblad equations for strongly coupled populations and coherences in photosynthetic complexes. Journal of Chemical Physics, 2009, 130, 204512. | 1.2 | 105 |
| 89 | Nonlinear optical response of conjugated polymers: Electron-hole anharmonic-oscillator picture. Physical Review Letters, 1992, 69, 65-68. | 2.9 | 104 |
| 90 | Femtosecond photon echoes in molecular aggregates. Journal of Chemical Physics, 1997, 107, 8759-8780. | 1.2 | 101 |

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| 91 | Roadmap on quantum light spectroscopy. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 072002. | 0.6 | 101 |
| 92 | Solvation structure and the timeâ€resolved Stokes shift in nonâ€Debye solvents. Journal of Chemical Physics, 1990, 93, 932-946. | 1.2 | 99 |
| 93 | Signatures of Î²-Peptide Unfolding in Two-Dimensional Vibrational Echo Spectroscopy:Â A Simulation Study. Journal of the American Chemical Society, 2001, 123, 3114-3124. | 6.6 | 99 |
| 94 | Stochastic theory of resonance Raman line shapes of polyatomic molecules in condensed phases. Journal of Chemical Physics, 1985, 82, 5398-5408. | 1.2 | 97 |
| 95 | Two-Dimensional Double-Quantum Spectra Reveal Collective Resonances in an Atomic Vapor. Physical Review Letters, 2012, 108, 193201. | 2.9 | 97 |
| 96 | Molecular Structure and Modeling of Waterâ€“Air and Iceâ€“Air Interfaces Monitored by Sum-Frequency Generation. Chemical Reviews, 2020, 120, 3633-3667. | 23.0 | 97 |
| 97 | UV-Light-Induced Vibrational Coherences: The Key to Understand Kasha Rule Violation in trans-Azobenzene. Journal of Physical Chemistry Letters, 2018, 9, 1534-1541. | 2.1 | 96 |
| 98 | Origin of spectral holes in pump-probe studies of homogeneously broadened lines. Physical Review A, 1984, 29, 1973-1983. | 1.0 | 95 |
| 99 | Anharmonic oscillator modeling of nonlinear susceptibilities and its application to conjugated polymers. Journal of Chemical Physics, 1994, 100, 2366-2384. | 1.2 | 95 |
| 100 | Interrogation of Vibrational Structure and Line Broadening of Liquid Water by Raman-Induced Kerr Effect Measurements within the Multimode Brownian Oscillator Model. The Journal of Physical Chemistry, 1996, 100, 10380-10388. | 2.9 | 95 |
| 101 | Excitonic couplings and electronic coherence in bridged naphthalene dimers. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 13003-13008. | 3.3 | 95 |
| 102 | Photofragmentation of linear triatomics. Journal of Chemical Physics, 1976, 65, 4035-4048. | 1.2 | 93 |
| 103 | Multistate quantum Fokkerâ€“Planck approach to nonadiabatic wave packet dynamics in pumpâ€“probe spectroscopy. Journal of Chemical Physics, 1994, 101, 3049-3061. | 1.2 | 93 |
| 104 | Superexchange versus sequential long range electron transfer; density matrix pathways in Liouville space. Chemical Physics, 1995, 197, 367-388. | 0.9 | 93 |
| 105 | Reaction Dynamics of a Photochromic Fluorescing Dithienylethene. Journal of Physical Chemistry A, 2001, 105, 1741-1749. | 1.1 | 93 |
| 106 | Electronic Coherence and Nonlinear Susceptibilities of Conjugated Polyenes. Science, 1994, 266, 250-254. | 6.0 | 92 |
| 107 | Lifetimes for resonance fluorescence and near resonance Raman scattering. Journal of Chemical Physics, 1975, 62, 3609. | 1.2 | 91 |
| 108 | Size Scaling of Third-Order Off-Resonant Polarizabilities. Electronic Coherence in Organic Oligomers. Journal of the American Chemical Society, 2000, 122, 452-459. | 6.6 | 91 |

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| 109 | Exciton-scaling and optical excitations of self-similar phenylacetylene dendrimers. Journal of Chemical Physics, 1999, 110, 8161-8175. | 1.2 | 90 |
| 110 | Coherent Multidimensional Optical Probes for Electron Correlations and Exciton Dynamics: From NMR to X-rays. Accounts of Chemical Research, 2009, 42, 553-562. | 7.6 | 90 |
| 111 | Reaction dynamics of photochromic dithienylethene derivatives. Chemical Physics, 1999, 246, 115-125. | 0.9 | 89 |
| 112 | Time-resolved x-ray spectroscopies:â€ƒNonlinear response functions and Liouville-space pathways. Physical Review A, 2001, 63, . | 1.0 | 88 |
| 113 | Optically Excited Entangled States in Organic Molecules Illuminate the Dark. Journal of Physical Chemistry Letters, 2013, 4, 2046-2052. | 2.1 | 88 |
| 114 | Entangled Two-Photon Absorption Spectroscopy. Accounts of Chemical Research, 2018, 51, 2207-2214. | 7.6 | 88 |
| 115 | Probing intermolecular couplings in liquid water with two-dimensional infrared photon echo spectroscopy. Journal of Chemical Physics, 2008, 128, 191103. | 1.2 | 86 |
| 116 | Impulsive pump-probe and photon-echo spectroscopies of dye molecules in condensed phases. Physical Review A, 1990, 42, 6920-6923. | 1.0 | 85 |
| 117 | Design strategies for pulse sequences in multidimensional optical spectroscopies. Journal of Chemical Physics, 2001, 115, 4989-5004. | 1.2 | 85 |
| 118 | Vibrationalâ^'Exciton Couplings for the Amide I, II, III, and A Modes of Peptides. Journal of Physical Chemistry B, 2007, 111, 11032-11046. | 1.2 | 85 |
| 119 | Optical Stark Spectroscopy of a Brownian Oscillator in Intense Fields. Journal of the Physical Society of Japan, 1994, 63, 66-77. | 0.7 | 85 |
| 120 | Superoperator nonequilibrium Greenâ€™s function theory of many-body systems; applications to charge transfer and transport in open junctions. Physics Reports, 2008, 465, 191-222. | 10.3 | 84 |
| 121 | Core and valence excitations in resonant X-ray spectroscopy using restricted excitation window time-dependent density functional theory. Journal of Chemical Physics, 2012, 137, 194306. | 1.2 | 83 |
| 122 | Novel photochemistry of molecular polaritons in optical cavities. Faraday Discussions, 2016, 194, 259-282. | 1.6 | 83 |
| 123 | Analysis of Absorption Spectra of Zinc Porphyrin, Zinc meso-Tetraphenylporphyrin, and Halogenated Derivatives. Journal of Physical Chemistry A, 2002, 106, 10285-10293. | 1.1 | 81 |
| 124 | Coherent Multidimensional Optical Spectroscopy. Accounts of Chemical Research, 2009, 42, 1207-1209. | 7.6 | 81 |
| 125 | Ultrafast Nonlinear Optical Signals Viewed from the Moleculeâ€™s Perspective. Advances in Atomic, Molecular and Optical Physics, 2010, , 223-263. | 2.3 | 81 |
| 126 | Collective electronic oscillators for nonlinear optical response of conjugated molecules. Chemical Physics Letters, 1996, 259, 55-61. | 1.2 | 80 |

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| 127 | Krylov-space algorithms for time-dependent Hartreeâ€“Fock and density functional computations. Journal of Chemical Physics, 2000, 113, 36-43. | 1.2 | 79 |
| 128 | Unified theory of photon echoes: The passage from inhomogeneous to homogeneous line broadening. Chemical Physics Letters, 1985, 114, 426-429. | 1.2 | 78 |
| 129 | Four-wave mixing and luminescence of confined excitons in molecular aggregates and nanostructures. many-body green function approach. Physics Reports, 1995, 263, 213-309. | 10.3 | 78 |
| 130 | Suppression of population transport and control of exciton distributions by entangled photons. Nature Communications, 2013, 4, 1782. | 5.8 | 78 |
| 131 | Molecular fluorescence and near resonance Raman yield as a probe for solvation dynamics. Journal of Chemical Physics, 1987, 86, 6085-6107. | 1.2 | 76 |
| 132 | Sizeâ€consistent quasiparticle representation of nonlinear optical susceptibilities in manyâ€electron systems. Journal of Chemical Physics, 1996, 104, 444-459. | 1.2 | 76 |
| 133 | Stochastic Liouville equation simulation of multidimensional vibrational line shapes of trialanine. Journal of Chemical Physics, 2004, 121, 10577-10598. | 1.2 | 76 |
| 134 | Effective temporal resolution in pump-probe spectroscopy with strongly chirped pulses. Physical Review A, 2010, 82, . | 1.0 | 76 |
| 135 | Infrared analogs of heteronuclear nuclear magnetic resonance coherence transfer experiments in peptides. Journal of Chemical Physics, 2002, 116, 6803-6816. | 1.2 | 75 |
| 136 | Nonlinear response of vibrational excitons: Simulating the two-dimensional infrared spectrum of liquid water. Journal of Chemical Physics, 2009, 130, 204110. | 1.2 | 75 |
| 137 | Exciton-scattering mechanism for enhanced nonlinear response of molecular nanostructures. Physical Review A, 1992, 46, 452-464. | 1.0 | 74 |
| 138 | Multidimensional femtosecond spectroscopies of vibrational motions in liquids: Semiclassical expansion. Journal of Chemical Physics, 1998, 108, 5812-5825. | 1.2 | 74 |
| 139 | Superradiance Coherence Sizes in Single-Molecule Spectroscopy of LH2 Antenna Complexes. Journal of Physical Chemistry B, 1999, 103, 3954-3962. | 1.2 | 74 |
| 140 | Stochastic theory of time-resolved four-wave mixing in interacting media. Physical Review A, 1991, 44, 2124-2129. | 1.0 | 73 |
| 141 | Coherent Ultrafast Core-Hole Correlation Spectroscopy: X-Ray Analogues of Multidimensional NMR. Physical Review Letters, 2007, 99, 163001. | 2.9 | 73 |
| 142 | Recursive densityâ€matrixâ€spectralâ€moment algorithm for molecular nonlinear polarizabilities. Journal of Chemical Physics, 1996, 105, 8914-8928. | 1.2 | 72 |
| 143 | 2D-IR Experiments and Simulations of the Coupling between Amide-I and Ionizable Side Chains in Proteins: Application to the Villin Headpiece. Journal of Physical Chemistry B, 2009, 113, 11260-11273. | 1.2 | 72 |
| 144 | Dielectric friction and the transition from adiabatic to nonadiabatic electron transfer in condensed phases. II. Application to nonâ€Debye solvents. Journal of Chemical Physics, 1988, 88, 4300-4311. | 1.2 | 71 |

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| 145 | A Quantum Chemical Interpretation of Two-Dimensional Electronic Spectroscopy of Light-Harvesting Complexes. Journal of the American Chemical Society, 2017, 139, 7558-7567. | 6.6 | 71 |
| 146 | Transient gratings, four-wave mixing and polariton effects in nonlinear optics. Physics Reports, 1991, 205, 1-58. | 10.3 | 69 |
| 147 | Ultrafast Nonlinear Spectroscopic Techniques in the Gas Phase and Their Density Matrix Representation. Journal of Physical Chemistry A, 2002, 106, 697-718. | 1.1 | 69 |
| 148 | Stochastic Liouville equations for hydrogen-bonding fluctuations and their signatures in two-dimensional vibrational spectroscopy of water. Journal of Chemical Physics, 2005, 123, 114504. | 1.2 | 69 |
| 149 | Collisional perturbations of time-resolved photon scattering from molecular levels. Physical Review A, 1975, 12, 947-958. | 1.0 | 68 |
| 150 | Structure, dynamics, and the electronic absorption of benzeneâ€“argon clusters. Journal of Chemical Physics, 1992, 96, 116-135. | 1.2 | 68 |
| 151 | Simulations of two-dimensional femtosecond infrared photon echoes of glycine dipeptide. Journal of Raman Spectroscopy, 2000, 31, 125-135. | 1.2 | 67 |
| 152 | Probing valence electronic wave-packet dynamics by all x-ray stimulated Raman spectroscopy: A simulation study. Physical Review A, 2007, 76, . | 1.0 | 67 |
| 153 | Solvation Effects in Four-Wave Mixing and Spontaneous Raman and Fluorescence Lineshapes of Polyatomic Molecules. Advances in Chemical Physics, 2007, , 165-230. | 0.3 | 66 |
| 154 | Two-dimensional stimulated resonance Raman spectroscopy of molecules with broadband x-ray pulses. Journal of Chemical Physics, 2012, 136, 174117. | 1.2 | 66 |
| 155 | Quantum Confined Fano Interference. Physical Review Letters, 1997, 78, 1363-1366. | 2.9 | 65 |
| 156 | Semiclassical dynamics in Liouville space: Application to molecular electronic spectroscopy. Journal of Chemical Physics, 1988, 88, 5735-5748. | 1.2 | 64 |
| 157 | Excitons in confined geometries: Size scaling of nonlinear susceptibilities. Journal of Chemical Physics, 1991, 95, 7526-7540. | 1.2 | 64 |
| 158 | Linear and nonlinear infrared signatures of local Î±- and 310-helical structures in alanine polypeptides. Journal of Chemical Physics, 2003, 118, 3651-3659. | 1.2 | 64 |
| 159 | Heat fluctuations and coherences in a quantum heat engine. Physical Review A, 2012, 86, . | 1.0 | 63 |
| 160 | Chemical Bonding and Size Scaling of Nonlinear Polarizabilities of Conjugated Polymers. Physical Review Letters, 1996, 77, 4656-4659. | 2.9 | 62 |
| 161 | Simulations of energy funneling and time- and frequency-gated fluorescence in dendrimers. Journal of Chemical Physics, 2001, 114, 2419-2429. | 1.2 | 62 |
| 162 | Control of Intrachromophore Excitonic Coherence in Electroluminescent Conjugated Dendrimers. Journal of Physical Chemistry B, 2002, 106, 7647-7653. | 1.2 | 62 |

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| 163 | Electronic density-matrix algorithm for nonadiabatic couplings in molecular dynamics simulations. International Journal of Quantum Chemistry, 2001, 85, 225-238. | 1.0 | 61 |
| 164 | Pulse shaping and coherent Raman spectroscopy in condensed phases. Journal of Chemical Physics, 1991, 94, 997-1005. | 1.2 | 60 |
| 165 | Correlated line broadening in multidimensional vibrational spectroscopy. Journal of Chemical Physics, 2002, 117, 11089-11101. | 1.2 | 60 |
| 166 | Machine Learning Protocol for Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 6026-6031. | 2.1 | 60 |
| 167 | Direct observation of coherent femtosecond solvent reorganization coupled to intramolecular electron transfer. Nature Chemistry, 2021, 13, 343-349. | 6.6 | 59 |
| 168 | Molecular photodissociation. Journal of Chemical Physics, 1974, 60, 4760-4777. | 1.2 | 58 |
| 169 | Ultraviolet Spectroscopy of Protein Backbone Transitions in Aqueous Solution: Combined QM and MM Simulations. Journal of Physical Chemistry B, 2010, 114, 8270-8277. | 1.2 | 58 |
| 170 | Communication: Comment on the effective temporal and spectral resolution of impulsive stimulated Raman signals. Journal of Chemical Physics, 2011, 134, 161101. | 1.2 | 58 |
| 171 | Monitoring molecular nonadiabatic dynamics with femtosecond X-ray diffraction. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6538-6547. | 3.3 | 58 |
| 172 | Manipulating nonadiabatic conical intersection dynamics by optical cavities. Chemical Science, 2020, 11, 1290-1298. | 3.7 | 58 |
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