

Roger F Loring

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9074569/publications.pdf>

Version: 2024-02-01

113
papers

3,202
citations

172207

29
h-index

174990

52
g-index

114
all docs

114
docs citations

114
times ranked

1370
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Time-resolved fluorescence and hole-burning line shapes of solvated molecules: Longitudinal dielectric relaxation and vibrational dynamics. <i>Journal of Chemical Physics</i> , 1987, 87, 5840-5857. | 1.2 | 191 |
| 2 | Electronic excited-state transport and trapping in solution. <i>Journal of Chemical Physics</i> , 1982, 76, 2015-2027. | 1.2 | 188 |
| 3 | Selectivity in coherent transient Raman measurements of vibrational dephasing in liquids. <i>Journal of Chemical Physics</i> , 1985, 83, 2116-2128. | 1.2 | 177 |
| 4 | Molecular theory of solvation and dielectric response in polar fluids. <i>Journal of Chemical Physics</i> , 1987, 87, 1272-1283. | 1.2 | 120 |
| 5 | Myoglobin-CO Substate Structures and Dynamics: A Multidimensional Vibrational Echoes and Molecular Dynamics Simulations. <i>Journal of the American Chemical Society</i> , 2003, 125, 13804-13818. | 6.6 | 115 |
| 6 | The Influence of Aqueous versus Glassy Solvents on Protein Dynamics: A Vibrational Echo Experiments and Molecular Dynamics Simulations. <i>Journal of the American Chemical Society</i> , 2005, 127, 14279-14289. | 6.6 | 96 |
| 7 | Dielectric Fluctuations and the Origins of Noncontact Friction. <i>Physical Review Letters</i> , 2006, 96, 156103. | 2.9 | 94 |
| 8 | Structural Assignments and Dynamics of the A Substates of MbCO: A Spectrally Resolved Vibrational Echo Experiments and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2003, 107, 4-7. | 1.2 | 85 |
| 9 | Semiclassical theory of the photon echo: Application to polar fluids. <i>Journal of Chemical Physics</i> , 1992, 97, 1217-1226. | 1.2 | 82 |
| 10 | Unified theory of photon echoes: The passage from inhomogeneous to homogeneous line broadening. <i>Chemical Physics Letters</i> , 1985, 114, 426-429. | 1.2 | 78 |
| 11 | Phonons in liquids: A random walk approach. <i>Journal of Chemical Physics</i> , 1992, 97, 8568-8575. | 1.2 | 72 |
| 12 | Simulation of polymer melt intercalation in layered nanocomposites. <i>Journal of Chemical Physics</i> , 1998, 109, 10321-10330. | 1.2 | 67 |
| 13 | Dynamics of a Myoglobin Mutant Enzyme: 2D IR Vibrational Echo Experiments and Simulations. <i>Journal of the American Chemical Society</i> , 2010, 132, 18367-18376. | 6.6 | 64 |
| 14 | Ultrafast Dynamics of Myoglobin without the Distal Histidine: A Stimulated Vibrational Echo Experiments and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2005, 109, 16959-16966. | 1.2 | 56 |
| 15 | Hopping transport on a randomly substituted lattice for long range and nearest neighbor interactions. <i>Journal of Chemical Physics</i> , 1984, 80, 5731-5744. | 1.2 | 53 |
| 16 | Myoglobin-CO Conformational Substate Dynamics: 2D Vibrational Echoes and MD Simulations. <i>Biophysical Journal</i> , 2002, 82, 3277-3288. | 0.2 | 52 |
| 17 | Vibrational Dephasing of Carbonmonoxy Myoglobin. <i>Journal of Physical Chemistry B</i> , 2001, 105, 4068-4071. | 1.2 | 50 |
| 18 | Photon echoes in a nonpolar fluid. <i>Chemical Physics Letters</i> , 1991, 186, 77-83. | 1.2 | 49 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Energetics of molecular elimination in the infrared multiphoton dissociation of CF ₂ Cl ₂ , CF ₂ Br ₂ , CF ₂ ClBr, and CFCl ₃ . Journal of Chemical Physics, 1981, 75, 148-158. | 1.2 | 44 |
| 20 | Electronic absorption spectra in a polar fluid: Theory and simulation. Journal of Chemical Physics, 1991, 95, 4756-4764. | 1.2 | 41 |
| 21 | Spontaneous swelling of layered nanostructures by a polymer melt. Journal of Chemical Physics, 1999, 111, 9754-9760. | 1.2 | 41 |
| 22 | Molecular dynamics study of the intercalation of diblock copolymers into layered silicates. Journal of Chemical Physics, 2000, 112, 9112-9119. | 1.2 | 41 |
| 23 | Collective motions in liquids with a normal mode approach. Journal of Chemical Physics, 1993, 99, 8936-8947. | 1.2 | 40 |
| 24 | Electronic excited state transport and trapping in one-and two-demensional disordered systems. Chemical Physics, 1982, 70, 139-147. | 0.9 | 39 |
| 25 | Dielectric fluctuations in force microscopy: Noncontact friction and frequency jitter. Journal of Chemical Physics, 2008, 128, 224706. | 1.2 | 36 |
| 26 | Vibrational line shapes of solvated molecules with a normal mode approach. Journal of Chemical Physics, 1995, 102, 2326-2337. | 1.2 | 33 |
| 27 | Semiclassical calculation of the vibrational echo. Journal of Chemical Physics, 2004, 120, 1491-1499. | 1.2 | 32 |
| 28 | Vibrational Echoes: Dephasing, Rephasing, and the Stability of Classical Trajectories. Journal of Physical Chemistry B, 2004, 108, 6536-6543. | 1.2 | 31 |
| 29 | Theory of resonant and nonresonant impulsive stimulated raman scattering. Chemical Physics Letters, 1989, 160, 299-304. | 1.2 | 30 |
| 30 | Molecular view of polymer flow into a strongly attractive slit. Journal of Chemical Physics, 1999, 111, 9068-9072. | 1.2 | 29 |
| 31 | Classical mechanical photon echo of a solvated anharmonic vibration. Journal of Chemical Physics, 2000, 113, 1932-1941. | 1.2 | 29 |
| 32 | Quantifying Electric Field Gradient Fluctuations over Polymers Using Ultrasensitive Cantilevers. Nano Letters, 2009, 9, 2273-2279. | 4.5 | 29 |
| 33 | Effective dephasing theory of the optical Anderson transition as probed by four-wave mixing spectroscopy. Journal of Chemical Physics, 1986, 85, 1950-1965. | 1.2 | 28 |
| 34 | Optical response functions with semiclassical dynamics. Journal of Chemical Physics, 2003, 119, 1003-1020. | 1.2 | 28 |
| 35 | Quantum theory of the electronic absorption line shape of a solvated molecule. Journal of Chemical Physics, 1990, 92, 1598-1607. | 1.2 | 27 |
| 36 | Noncontact Dielectric Friction. Journal of Physical Chemistry B, 2006, 110, 14525-14528. | 1.2 | 27 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Time- and frequency-resolved fluorescence line shapes as a probe of solvation dynamics. Chemical Physics Letters, 1987, 135, 23-29. | 1.2 | 26 |
| 38 | Theory of photon echoes from interacting impurities in crystals with inhomogeneously broadened absorption spectra. Journal of Chemical Physics, 1984, 81, 5395-5404. | 1.2 | 22 |
| 39 | Vibrational dephasing of an anharmonic solute strongly coupled to solvent. Journal of Chemical Physics, 1999, 110, 10899-10906. | 1.2 | 22 |
| 40 | Mean-trajectory approximation for electronic and vibrational-electronic nonlinear spectroscopy. Journal of Chemical Physics, 2017, 146, 144106. | 1.2 | 22 |
| 41 | Configurational relaxation and diffusion of a flexible polymer in a dynamically disordered medium. Journal of Chemical Physics, 1991, 94, 1505-1515. | 1.2 | 21 |
| 42 | Time resolved stimulated light scattering from a solvated chromophore: A molecular dynamics study. Journal of Chemical Physics, 1991, 94, 7575-7587. | 1.2 | 21 |
| 43 | Local Vitrification Model for Melt Dynamics. Macromolecules, 1999, 32, 949-951. | 2.2 | 21 |
| 44 | Excitation Transport on Substitutionally Disordered Lattices. Physical Review Letters, 1983, 50, 1324-1327. | 2.9 | 20 |
| 45 | Microscopic theory of the transient grating experiment. Journal of Chemical Physics, 1985, 83, 4353-4359. | 1.2 | 20 |
| 46 | Extra resonances in four-wave mixing as a probe of exciton dynamics: The steady-state analog of the transient grating. Journal of Chemical Physics, 1986, 84, 1228-1242. | 1.2 | 20 |
| 47 | Computing the classical mechanical vibrational echo with the fluctuating frequency approximation. Journal of Chemical Physics, 2000, 113, 10651-10662. | 1.2 | 20 |
| 48 | Semiclassical mean-trajectory approximation for nonlinear spectroscopic response functions. Journal of Chemical Physics, 2008, 129, 124510. | 1.2 | 20 |
| 49 | A unified theory of the dynamics of linear chain macromolecules: From unentangled to entangled polymer fluids. Journal of Chemical Physics, 1991, 95, 2080-2096. | 1.2 | 19 |
| 50 | Dephasing of a solvated two-level system: A semiclassical approach for parallel computing. Journal of Chemical Physics, 1996, 105, 6596-6606. | 1.2 | 19 |
| 51 | Interference and quantization in semiclassical response functions. Journal of Chemical Physics, 2008, 128, 124106. | 1.2 | 19 |
| 52 | Quantum transport and localization in disordered media: Liouville space dynamics with frequency-dependent dephasing. Chemical Physics, 1988, 128, 99-123. | 0.9 | 18 |
| 53 | Viscoelasticity of a fluid of dynamically disordered harmonic macromolecules. Journal of Chemical Physics, 1995, 103, 4711-4722. | 1.2 | 18 |
| 54 | Theory of carrier motion in dynamically disordered systems. Journal of Chemical Physics, 1987, 86, 2249-2263. | 1.2 | 17 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 55 | Vibrational echoes for classical and quantum solutes. Journal of Chemical Physics, 2002, 116, 4655-4664. | 1.2 | 17 |
| 56 | Two-Dimensional Vibrational Spectroscopy of a Dissipative System with the Optimized Mean-Trajectory Approximation. Journal of Physical Chemistry B, 2015, 119, 8950-8959. | 1.2 | 17 |
| 57 | Self-consistent mode-coupling theory of quantum percolation. Physical Review B, 1986, 33, 7708-7714. | 1.1 | 16 |
| 58 | Crossover from dynamic towards static line broadening in the classical mechanical vibrational photon echo. Chemical Physics, 2001, 266, 167-176. | 0.9 | 16 |
| 59 | Dielectric Fluctuations over Polymer Films Detected Using an Atomic Force Microscope. Journal of Physical Chemistry B, 2011, 115, 14493-14500. | 1.2 | 16 |
| 60 | Vibrational coherence and energy transfer in two-dimensional spectra with the optimized mean-trajectory approximation. Journal of Chemical Physics, 2015, 142, 212417. | 1.2 | 16 |
| 61 | Self-consistent theory of polymer dynamics in melts. Journal of Chemical Physics, 1991, 95, 8474-8485. | 1.2 | 15 |
| 62 | Segment dynamics in entangled polymer melts. Journal of Chemical Physics, 1993, 99, 7150-7168. | 1.2 | 15 |
| 63 | Effective medium approximation for random walks with non-Markovian dynamical disorder. Physical Review E, 1994, 50, 2439-2450. | 0.8 | 15 |
| 64 | Interpreting nonlinear vibrational spectroscopy with the classical mechanical analogs of double-sided Feynman diagrams. Journal of Chemical Physics, 2004, 121, 7057-7069. | 1.2 | 15 |
| 65 | Polymer dynamics in binary blends. Journal of Chemical Physics, 1992, 97, 3710-3721. | 1.2 | 14 |
| 66 | Two-Dimensional Spectroscopy of Coupled Vibrations with the Optimized Mean-Trajectory Approximation. Journal of Physical Chemistry B, 2013, 117, 15452-15461. | 1.2 | 14 |
| 67 | An optimized semiclassical approximation for vibrational response functions. Journal of Chemical Physics, 2013, 138, 124104. | 1.2 | 14 |
| 68 | Hopping transport on a randomly substituted lattice in the presence of dilute deep traps. Chemical Physics, 1984, 85, 149-164. | 0.9 | 13 |
| 69 | Calculation of the dynamic structure factor in polymer melts. Journal of Chemical Physics, 1994, 101, 1595-1606. | 1.2 | 13 |
| 70 | Classical and quantum mechanical infrared echoes from resonantly coupled molecular vibrations. Journal of Chemical Physics, 2005, 122, 174507. | 1.2 | 13 |
| 71 | Single Turnover Measurements of Nanoparticle Catalysis Analyzed with Dwell Time Correlation Functions and Constrained Mean Dwell Times. Journal of Physical Chemistry C, 2013, 117, 19074-19081. | 1.5 | 13 |
| 72 | Diffusion of a flexible polymer chain in a disordered medium. Journal of Chemical Physics, 1988, 88, 6631-6640. | 1.2 | 12 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 73 | Anderson localization in Liouville space: The effective dephasing approximation. Physical Review B, 1988, 37, 1874-1883. | 1.1 | 12 |
| 74 | Calculation of the photon echo with mixed-state propagation. Chemical Physics Letters, 1998, 287, 217-223. | 1.2 | 12 |
| 75 | Interpreting single turnover catalysis measurements with constrained mean dwell times. Journal of Chemical Physics, 2011, 135, 174509. | 1.2 | 12 |
| 76 | Electric force microscopy of semiconductors: Theory of cantilever frequency fluctuations and noncontact friction. Journal of Chemical Physics, 2013, 139, 184702. | 1.2 | 12 |
| 77 | Phonon and fracton vibrational modes in disordered harmonic structures: A self-consistent theory. Physical Review B, 1986, 34, 6582-6585. | 1.1 | 11 |
| 78 | Self-consistent mode-coupling theory of electrical conductivity and incoherent excitation transport in disordered media. Journal of Chemical Physics, 1987, 86, 1323-1339. | 1.2 | 11 |
| 79 | Static and dynamic vibrational dephasing in a dense fluid. Journal of Chemical Physics, 1996, 104, 4736-4745. | 1.2 | 11 |
| 80 | A model of relaxation in supercooled polymer melts. Journal of Chemical Physics, 1998, 108, 2189-2196. | 1.2 | 11 |
| 81 | Charge carrier dynamics and interactions in electric force microscopy. Journal of Chemical Physics, 2012, 137, 124701. | 1.2 | 11 |
| 82 | Electronic properties of a dilute polarizable fluid: A Green's function approach. Journal of Chemical Physics, 1994, 101, 4133-4142. | 1.2 | 10 |
| 83 | Dynamic structure factor in a bidisperse polymer melt. Journal of Chemical Physics, 1995, 103, 1641-1649. | 1.2 | 10 |
| 84 | Effect of noise on the classical and quantum mechanical nonlinear response of resonantly coupled anharmonic oscillators. Journal of Chemical Physics, 2006, 124, 194101. | 1.2 | 10 |
| 85 | Two-dimensional vibronic spectra from classical trajectories. Journal of Chemical Physics, 2019, 150, 164114. | 1.2 | 10 |
| 86 | Electronic spectra in polar fluids: Reference hypernetted chain theory. Journal of Chemical Physics, 1992, 96, 8637-8638. | 1.2 | 9 |
| 87 | Dephasing of an anharmonic vibration in solution. Journal of Chemical Physics, 2000, 112, 3104-3105. | 1.2 | 9 |
| 88 | Semiclassical nonlinear response functions for coupled anharmonic vibrations. Journal of Chemical Physics, 2009, 131, 204504. | 1.2 | 9 |
| 89 | Thermal weights for semiclassical vibrational response functions. Journal of Chemical Physics, 2015, 143, 084101. | 1.2 | 9 |
| 90 | One and Two Dimensional Vibronic Spectra for an Exciton Dimer from Classical Trajectories. Journal of Physical Chemistry B, 2020, 124, 9913-9920. | 1.2 | 9 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 91 | Two-dimensional vibrationalâ€“electronic spectra with semiclassical mechanics. Journal of Chemical Physics, 2021, 154, 194110. | 1.2 | 9 |
| 92 | Quantum Solvent and Solute Effects in the Infrared Vibrational Echoâ€“. Journal of Physical Chemistry A, 2003, 107, 8024-8028. | 1.1 | 8 |
| 93 | Quantum mechanical analysis of impulsive stimulated light scattering from phonons. Journal of Chemical Physics, 1990, 93, 7566-7580. | 1.2 | 7 |
| 94 | Semiclassical Quantization in Liouville Space for Vibrational Dynamics. Journal of Physical Chemistry B, 2011, 115, 5148-5156. | 1.2 | 7 |
| 95 | Calculating Multidimensional Optical Spectra from Classical Trajectories. Annual Review of Physical Chemistry, 2022, 73, 273-297. | 4.8 | 7 |
| 96 | Vibrational Dephasing of a Polar Solute in a Fused Salt. The Journal of Physical Chemistry, 1996, 100, 10355-10362. | 2.9 | 6 |
| 97 | Driven Diffusion of Confined Polymers. Macromolecules, 2001, 34, 5727-5729. | 2.2 | 6 |
| 98 | Stress relaxation in unentangled and entangled polymer liquids. Journal of Chemical Physics, 1996, 104, 5284-5293. | 1.2 | 5 |
| 99 | Relaxation in a supercooled polymer melt within the dynamically disordered Rouse model. Journal of Chemical Physics, 2000, 112, 10588-10598. | 1.2 | 5 |
| 100 | Thermal Population Fluctuations in Two-Dimensional Infrared Spectroscopy Captured with Semiclassical Mechanics. Journal of Physical Chemistry B, 2018, 122, 3647-3654. | 1.2 | 5 |
| 101 | Spectroscopic response theory with classical mapping Hamiltonians. Journal of Chemical Physics, 2020, 153, 204103. | 1.2 | 5 |
| 102 | Selfâ€“consistent modeâ€“coupling theory of excitation transport with longâ€“range transfer rates in solution. Journal of Chemical Physics, 1987, 86, 6419-6424. | 1.2 | 4 |
| 103 | Relaxation in a confined and entangled polymer liquid. Journal of Chemical Physics, 1997, 106, 701-710. | 1.2 | 3 |
| 104 | Nonlinear spectroscopy of resonantly coupled classical mechanical molecular vibrations. Molecular Physics, 2005, 103, 3071-3081. | 0.8 | 3 |
| 105 | Dephasing dynamics in confined myoglobin. Chemical Physics, 2007, 341, 37-44. | 0.9 | 3 |
| 106 | Two-dimensional vibronic spectroscopy with semiclassical thermofield dynamics. Journal of Chemical Physics, 2022, 156, 124108. | 1.2 | 3 |
| 107 | 2D electronic-vibrational spectroscopy with classical trajectories. Journal of Chemical Physics, 2022, 156, . | 1.2 | 3 |
| 108 | Exciton transport and Anderson localization in Liouville space: The effective dephasing approximation. Journal of Luminescence, 1987, 38, 1-2. | 1.5 | 1 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 109 | Polymer motions from localization to Rouse dynamics in supercooled melts. Journal of Chemical Physics, 2001, 114, 9156-9162. | 1.2 | 1 |
| 110 | Biography of Andreas C. Albrecht June 3, 1927~September 26, 2002 Â. Journal of Physical Chemistry A, 2003, 107, 8009-8011. | 1.1 | 0 |
| 111 | Comment on "Ultrafast Dynamics of Myoglobin without the Distal Histidine: Stimulated Vibrational Echo Experiments and Molecular Dynamics Simulations" Journal of Physical Chemistry B, 2007, 111, 12938-12939. | 1.2 | 0 |
| 112 | Lattice model of spatial correlations in catalysis. Journal of Chemical Physics, 2016, 145, 134508. | 1.2 | 0 |
| 113 | Tribute to Benjamin Widom. Journal of Physical Chemistry B, 2018, 122, 3203-3205. | 1.2 | 0 |