Roger F Loring

List of Publications by Year
in descending order

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	Calculating Multidimensional Optical Spectra from Classical Trajectories. Annual Review of Physical Chemistry, 2022, 73, 273-297.	4.8	7
2	Two-dimensional vibronic spectroscopy with semiclassical thermofield dynamics. Journal of Chemical Physics, 2022, 156, 124108.	1.2	3
3	2D electronic-vibrational spectroscopy with classical trajectories. Journal of Chemical Physics, 2022, 156, .	1.2	3
4	Two-dimensional vibrationalâ€“electronic spectra with semiclassical mechanics. Journal of Chemical Physics, 2021, 154, 194110.	1.2	9
5	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
6	Spectroscopic response theory with classical mapping Hamiltonians. Journal of Chemical Physics, 2020, 153, 204103.	1.2	5
7	Two-dimensional vibronic spectra from classical trajectories. Journal of Chemical Physics, 2019, 150, 164114.	1.2	10
8	Tribute to Benjamin Widom. Journal of Physical Chemistry B, 2018, 122, 3203-3205.	1.2	0
9	Thermal Population Fluctuations in Two-Dimensional Infrared Spectroscopy Captured with Semiclassical Mechanics. Journal of Physical Chemistry B, 2018, 122, 3647-3654.	1.2	5
10	Mean-trajectory approximation for electronic and vibrational-electronic nonlinear spectroscopy. Journal of Chemical Physics, 2017, 146, 144106.	1.2	22
11	Lattice model of spatial correlations in catalysis. Journal of Chemical Physics, 2016, 145, 134508.	1.2	0
12	Thermal weights for semiclassical vibrational response functions. Journal of Chemical Physics, 2015, 143, 084101.	1.2	9
13	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
14	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
15	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
16	Two-Dimensional Spectroscopy of Coupled Vibrations with the Optimized Mean-Trajectory Approximation. Journal of Physical Chemistry B, 2013, 117, 15452-15461.	1.2	14
17	An optimized semiclassical approximation for vibrational response functions. Journal of Chemical Physics, 2013, 138, 124104.	1.2	14
18	Electric force microscopy of semiconductors: Theory of cantilever frequency fluctuations and noncontact friction. Journal of Chemical Physics, 2013, 139, 184702.	1.2	12

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19	Charge carrier dynamics and interactions in electric force microscopy. Journal of Chemical Physics, 2012, 137, 124701.	1.2	11
20	Dielectric Fluctuations over Polymer Films Detected Using an Atomic Force Microscope. Journal of Physical Chemistry B, 2011, 115, 14493-14500.	1.2	16
21	Semiclassical Quantization in Liouville Space for Vibrational Dynamics. Journal of Physical Chemistry B, 2011, 115, 5148-5156.	1.2	7
22	Interpreting single turnover catalysis measurements with constrained mean dwell times. Journal of Chemical Physics, 2011, 135, 174509.	1.2	12
23	Dynamics of a Myoglobin Mutant Enzyme: 2D IR Vibrational Echo Experiments and Simulations. Journal of the American Chemical Society, 2010, 132, 18367-18376.	6.6	64
24	Semiclassical nonlinear response functions for coupled anharmonic vibrations. Journal of Chemical Physics, 2009, 131, 204504.	1.2	9
25	Quantifying Electric Field Gradient Fluctuations over Polymers Using Ultrasensitive Cantilevers. Nano Letters, 2009, 9, 2273-2279.	4.5	29
26	Interference and quantization in semiclassical response functions. Journal of Chemical Physics, 2008, 128, 124106.	1.2	19
27	Semiclassical mean-trajectory approximation for nonlinear spectroscopic response functions. Journal of Chemical Physics, 2008, 129, 124510.	1.2	20
28	Dielectric fluctuations in force microscopy: Noncontact friction and frequency jitter. Journal of Chemical Physics, 2008, 128, 224706.	1.2	36
29	Comment on â€œUltrafast Dynamics of Myoglobin without the Distal Histidine:â€‰ Stimulated Vibrational Echo Experiments and Molecular Dynamics Simulationsâ€• Journal of Physical Chemistry B, 2007, 111, 12938-12939.	1.2	0
30	Dephasing dynamics in confined myoglobin. Chemical Physics, 2007, 341, 37-44.	0.9	3
31	Noncontact Dielectric Friction. Journal of Physical Chemistry B, 2006, 110, 14525-14528.	1.2	27
32	Dielectric Fluctuations and the Origins of Noncontact Friction. Physical Review Letters, 2006, 96, 156103.	2.9	94
33	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
34	Classical and quantum mechanical infrared echoes from resonantly coupled molecular vibrations. Journal of Chemical Physics, 2005, 122, 174507.	1.2	13
35	Nonlinear spectroscopy of resonantly coupled classical mechanical molecular vibrations. Molecular Physics, 2005, 103, 3071-3081.	0.8	3
36	The Influence of Aqueous versus Glassy Solvents on Protein Dynamics:Â Vibrational Echo Experiments and Molecular Dynamics Simulations. Journal of the American Chemical Society, 2005, 127, 14279-14289.	6.6	96

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37	Ultrafast Dynamics of Myoglobin without the Distal Histidine:â€‰ Stimulated Vibrational Echo Experiments and Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2005, 109, 16959-16966.	1.2	56
38	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
39	Semiclassical calculation of the vibrational echo. Journal of Chemical Physics, 2004, 120, 1491-1499.	1.2	32
40	Vibrational Echoes:â€‰ Dephasing, Rephasing, and the Stability of Classical Trajectories. Journal of Physical Chemistry B, 2004, 108, 6536-6543.	1.2	31
41	Myoglobin-CO Substate Structures and Dynamics:Â Multidimensional Vibrational Echoes and Molecular Dynamics Simulations. Journal of the American Chemical Society, 2003, 125, 13804-13818.	6.6	115
42	Quantum Solvent and Solute Effects in the Infrared Vibrational Echoâ€. Journal of Physical Chemistry A, 2003, 107, 8024-8028.	1.1	8
43	Structural Assignments and Dynamics of the A Substates of MbCO:Â Spectrally Resolved Vibrational Echo Experiments and Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2003, 107, 4-7.	1.2	85
44	Biography of Andreas C. Albrecht June 3, 1927â"September 26, 2002 Â. Journal of Physical Chemistry A, 2003, 107, 8009-8011.	1.1	0
45	Optical response functions with semiclassical dynamics. Journal of Chemical Physics, 2003, 119, 1003-1020.	1.2	28
46	Vibrational echoes for classical and quantum solutes. Journal of Chemical Physics, 2002, 116, 4655-4664.	1.2	17
47	Myoglobin-CO Conformational Substate Dynamics: 2D Vibrational Echoes and MD Simulations. Biophysical Journal, 2002, 82, 3277-3288.	0.2	52
48	Driven Diffusion of Confined Polymers. Macromolecules, 2001, 34, 5727-5729.	2.2	6
49	Vibrational Dephasing of Carbonmonoxy Myoglobin. Journal of Physical Chemistry B, 2001, 105, 4068-4071.	1.2	50
50	Crossover from dynamic towards static line broadening in the classical mechanical vibrational photon echo. Chemical Physics, 2001, 266, 167-176.	0.9	16
51	Polymer motions from localization to Rouse dynamics in supercooled melts. Journal of Chemical Physics, 2001, 114, 9156-9162.	1.2	1
52	Classical mechanical photon echo of a solvated anharmonic vibration. Journal of Chemical Physics, 2000, 113, 1932-1941.	1.2	29
53	Computing the classical mechanical vibrational echo with the fluctuating frequency approximation. Journal of Chemical Physics, 2000, 113, 10651-10662.	1.2	20
54	Dephasing of an anharmonic vibration in solution. Journal of Chemical Physics, 2000, 112, 3104-3105.	1.2	9

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55	Relaxation in a supercooled polymer melt within the dynamically disordered Rouse model. Journal of Chemical Physics, 2000, 112, 10588-10598.	1.2	5
56	Molecular dynamics study of the intercalation of diblock copolymers into layered silicates. Journal of Chemical Physics, 2000, 112, 9112-9119.	1.2	41
57	Molecular view of polymer flow into a strongly attractive slit. Journal of Chemical Physics, 1999, 111, 9068-9072.	1.2	29
58	Spontaneous swelling of layered nanostructures by a polymer melt. Journal of Chemical Physics, 1999, 111, 9754-9760.	1.2	41
59	Vibrational dephasing of an anharmonic solute strongly coupled to solvent. Journal of Chemical Physics, 1999, 110, 10899-10906.	1.2	22
60	Local Vitrification Model for Melt Dynamics. Macromolecules, 1999, 32, 949-951.	2.2	21
61	Calculation of the photon echo with mixed-state propagation. Chemical Physics Letters, 1998, 287, 217-223.	1.2	12
62	Simulation of polymer melt intercalation in layered nanocomposites. Journal of Chemical Physics, 1998, 109, 10321-10330.	1.2	67
63	A model of relaxation in supercooled polymer melts. Journal of Chemical Physics, 1998, 108, 2189-2196.	1.2	11
64	Relaxation in a confined and entangled polymer liquid. Journal of Chemical Physics, 1997, 106, 701-710.	1.2	3
65	Dephasing of a solvated twoâ€level system: A semiclassical approach for parallel computing. Journal of Chemical Physics, 1996, 105, 6596-6606.	1.2	19
66	Stress relaxation in unentangled and entangled polymer liquids. Journal of Chemical Physics, 1996, 104, 5284-5293.	1.2	5
67	Static and dynamic vibrational dephasing in a dense fluid. Journal of Chemical Physics, 1996, 104, 4736-4745.	1.2	11
68	Vibrational Dephasing of a Polar Solute in a Fused Salt. The Journal of Physical Chemistry, 1996, 100, 10355-10362.	2.9	6
69	Viscoelasticity of a fluid of dynamically disordered harmonic macromolecules. Journal of Chemical Physics, 1995, 103, 4711-4722.	1.2	18
70	Dynamic structure factor in a bidisperse polymer melt. Journal of Chemical Physics, 1995, 103, 1641-1649.	1.2	10
71	Vibrational line shapes of solvated molecules with a normal mode approach. Journal of Chemical Physics, 1995, 102, 2326-2337.	1.2	33
72	Electronic properties of a dilute polarizable fluid: A Greenâ€™s function approach. Journal of Chemical Physics, 1994, 101, 4133-4142.	1.2	10

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73	Calculation of the dynamic structure factor in polymer melts. Journal of Chemical Physics, 1994, 101, 1595-1606.	1.2	13
74	Effective medium approximation for random walks with non-Markovian dynamical disorder. Physical Review E, 1994, 50, 2439-2450.	0.8	15
75	Collective motions in liquids with a normal mode approach. Journal of Chemical Physics, 1993, 99, 8936-8947.	1.2	40
76	Segment dynamics in entangled polymer melts. Journal of Chemical Physics, 1993, 99, 7150-7168.	1.2	15
77	Semiclassical theory of the photon echo: Application to polar fluids. Journal of Chemical Physics, 1992, 97, 1217-1226.	1.2	82
78	Polymer dynamics in binary blends. Journal of Chemical Physics, 1992, 97, 3710-3721.	1.2	14
79	Electronic spectra in polar fluids: Reference hypernetted chain theory. Journal of Chemical Physics, 1992, 96, 8637-8638.	1.2	9
80	Phonons in liquids: A random walk approach. Journal of Chemical Physics, 1992, 97, 8568-8575.	1.2	72
81	Photon echoes in a nonpolar fluid. Chemical Physics Letters, 1991, 186, 77-83.	1.2	49
82	Selfâ€consistent theory of polymer dynamics in melts. Journal of Chemical Physics, 1991, 95, 8474-8485.	1.2	15
83	Electronic absorption spectra in a polar fluid: Theory and simulation. Journal of Chemical Physics, 1991, 95, 4756-4764.	1.2	41
84	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
85	Configurational relaxation and diffusion of a flexible polymer in a dynamically disordered medium. Journal of Chemical Physics, 1991, 94, 1505-1515.	1.2	21
86	Time resolved stimulated light scattering from a solvated chromophore: A molecular dynamics study. Journal of Chemical Physics, 1991, 94, 7575-7587.	1.2	21
87	Quantum theory of the electronic absorption line shape of a solvated molecule. Journal of Chemical Physics, 1990, 92, 1598-1607.	1.2	27
88	Quantum mechanical analysis of impulsive stimulated light scattering from phonons. Journal of Chemical Physics, 1990, 93, 7566-7580.	1.2	7
89	Theory of resonant and nonresonant impulsive stimulated raman scattering. Chemical Physics Letters, 1989, 160, 299-304.	1.2	30
90	Quantum transport and localization in disordered media: Liouville space dynamics with frequency-dependent dephasing. Chemical Physics, 1988, 128, 99-123.	0.9	18

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91	Diffusion of a flexible polymer chain in a disordered medium. Journal of Chemical Physics, 1988, 88, 6631-6640.	1.2	12
92	Anderson localization in Liouville space: The effective dephasing approximation. Physical Review B, 1988, 37, 1874-1883.	1.1	12
93	Theory of carrier motion in dynamically disordered systems. Journal of Chemical Physics, 1987, 86, 2249-2263.	1.2	17
94	Selfâ€consistent modeâ€coupling theory of electrical conductivity and incoherent excitation transport in disordered media. Journal of Chemical Physics, 1987, 86, 1323-1339.	1.2	11
95	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
96	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
97	Molecular theory of solvation and dielectric response in polar fluids. Journal of Chemical Physics, 1987, 87, 1272-1283.	1.2	120
98	Time- and frequency-resolved fluorescence line shapes as a probe of solvation dynamics. Chemical Physics Letters, 1987, 135, 23-29.	1.2	26
99	Exciton transport and Anderson localization in Liouville space: The effective dephasing approximation. Journal of Luminescence, 1987, 38, 1-2.	1.5	1
100	Extra resonances in fourâ€wave mixing as a probe of exciton dynamics: The steadyâ€state analog of the transient grating. Journal of Chemical Physics, 1986, 84, 1228-1242.	1.2	20
101	Self-consistent mode-coupling theory of quantum percolation. Physical Review B, 1986, 33, 7708-7714.	1.1	16
102	Phonon and fracton vibrational modes in disordered harmonic structures: A self-consistent theory. Physical Review B, 1986, 34, 6582-6585.	1.1	11
103	Effective dephasing theory of the optical Anderson transition as probed by fourâ€waveâ€mixing spectroscopy. Journal of Chemical Physics, 1986, 85, 1950-1965.	1.2	28
104	Unified theory of photon echoes: The passage from inhomogeneous to homogeneous line broadening. Chemical Physics Letters, 1985, 114, 426-429.	1.2	78
105	Microscopic theory of the transient grating experiment. Journal of Chemical Physics, 1985, 83, 4353-4359.	1.2	20
106	Selectivity in coherent transient Raman measurements of vibrational dephasing in liquids. Journal of Chemical Physics, 1985, 83, 2116-2128.	1.2	177
107	Hopping transport on a randomly substituted lattice for long range and nearest neighbor interactions. Journal of Chemical Physics, 1984, 80, 5731-5744.	1.2	53
108	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

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109	Hopping transport on a randomly substituted lattice in the presence of dilute deep traps. Chemical Physics, 1984, 85, 149-164.	0.9	13
110	Excitation Transport on Substitutionally Disordered Lattices. Physical Review Letters, 1983, 50, 1324-1327.	2.9	20
111	Electronic excitedâ€state transport and trapping in solution. Journal of Chemical Physics, 1982, 76, 2015-2027.	1.2	188
112	Electronic excited state transport and trapping in one-and two-demensional disordered systems. Chemical Physics, 1982, 70, 139-147.	0.9	39
113	Energetics of molecular elimination in the infrared multiphoton dissociation of CF2Cl2, CF2Br2, CF2ClBr, and CFCl3. Journal of Chemical Physics, 1981, 75, 148-158.	1.2	44