Richard M Stratt

List of Publications by Year
in descending order

70 papers	3,338 citations	186265 28 h-index	138484 58 g-index
71 all docs	71 docs citations	71 times ranked	1505 citing authors

#	Article	IF	Citations
1	Measuring order in disordered systems and disorder in ordered systems: Random matrix theory for isotropic and nematic liquid crystals and its perspective on pseudo-nematic domains. Journal of Chemical Physics, 2018, 148, 204501.	3.0	1
2	What is special about how roaming chemical reactions traverse their potential surfaces? Differences in geodesic paths between roaming and non-roaming events. Journal of Chemical Physics, 2017, 146, 214303.	3.0	11
3	The inherent dynamics of isotropic- and nematic-phase liquid crystals. Journal of Chemical Physics, 2016, 144, 234505.	3.0	3
4	Effects of Electronic-State-Dependent Solute Polarizability: Application to Solute-Pump/Solvent-Probe Spectra. Journal of Physical Chemistry B, 2015, 119, 9129-9139.	2.6	8
5	The inherent dynamics of a molecular liquid: Geodesic pathways through the potential energy landscape of a liquid of linear molecules. Journal of Chemical Physics, 2014, 140, 174503.	3.0	4
6	Potential energy landscape and inherent dynamics of a hard-sphere fluid. Physical Review E, 2014, 90, 042314.	2.1	5
7	Preferential solvation dynamics in liquids: How geodesic pathways through the potential energy landscape reveal mechanistic details about solute relaxation in liquids. Journal of Chemical Physics, 2010, 133, 124503.	3.0	24
8	Nonlinear Thinking About Molecular Energy Transfer. Science, 2008, 321, 1789-1790.	12.6	11
9	Global perspectives on the energy landscapes of liquids, supercooled liquids, and glassy systems: Geodesic pathways through the potential energy landscape. Journal of Chemical Physics, 2007, 127, 224504.	3.0	20
10	Internal Excitations in Liquids. Advances in Chemical Physics, 2007, , 1-60.	0.3	13
11	Global perspectives on the energy landscapes of liquids, supercooled liquids, and glassy systems: The potential energy landscape ensemble. Journal of Chemical Physics, 2007, 127, 224503.	3.0	19
12	A Case Study in the Molecular Interpretation of Optical Kerr Effect Spectra:â€‰ Instantaneous-Normal-Mode Analysis of the OKE Spectrum of Liquid Benzene. Journal of Physical Chemistry B, 2004, 108, 6782-6795.	2.6	105
13	Diffraction Signals of Aligned Molecules in the Gas Phase:â€‰ Tetrazine in Intense Laser Fields. Journal of Physical Chemistry A, 2003, 107, 6622-6629.	2.5	19
14	Multiphonon vibrational relaxation in liquids: An exploration of the idea and of the problems it causes for molecular dynamics algorithms. Journal of Chemical Physics, 2003, 119, 6709-6718.	3.0	6
15	Selecting the information content of two-dimensional Raman spectra in liquids. Journal of Chemical Physics, 2003, 119, 8500-8510.	3.0	10
16	The molecular origins of the two-dimensional Raman spectrum of an atomic liquid. I. Molecular dynamics simulation. Journal of Chemical Physics, 2002, 116, 4962.	3.0	33
17	Vibrational energy relaxation of polyatomic molecules in liquids: The solventâ€™s perspective. Journal of Chemical Physics, 2002, 117, 1735-1749.	3.0	44
18	High-frequency vibrational energy relaxation in liquids: The foundations of instantaneous-pair theory and some generalizations. Journal of Chemical Physics, 2002, 117, 10752-10767.	3.0	42

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19	The diffraction signatures of individual vibrational modes in polyatomic molecules. Journal of Chemical Physics, 2000, 112, 1260-1270.	3.0	12
20	Rotational energy relaxation of individual rotational states in liquids. Journal of Chemical Physics, 2000, 113, 5901-5916.	3.0	26
21	Dephasing of individual rotational states in liquids. Journal of Chemical Physics, 2000, 113, 11212-11221.	3.0	14
22	The short-time dynamics of molecular reorientation in liquids. II. The microscopic mechanism of rotational friction. Journal of Chemical Physics, 2000, 112, 7538-7550.	3.0	20
23	The short-time dynamics of molecular reorientation in liquids. I. The instantaneous generalized Langevin equation. Journal of Chemical Physics, 2000, 112, 7524-7537.	3.0	24
24	Instantaneous pair theory for high-frequency vibrational energy relaxation in fluids. Journal of Chemical Physics, 1999, 110, 1036-1052.	3.0	63
25	On the role of dielectric friction in vibrational energy relaxation. Journal of Chemical Physics, 1999, 111, 2008-2018.	3.0	47
26	Short-Time Dynamics of Vibrational Relaxation in Molecular Fluids. Journal of Physical Chemistry A, 1998, 102, 1068-1082.	2.5	74
27	The anharmonic features of the short-time dynamics of fluids: The time evolution and mixing of instantaneous normal modes. Journal of Chemical Physics, 1998, 109, 1375-1390.	3.0	30
28	The short-time intramolecular dynamics of solutes in liquids. II. Vibrational population relaxation. Journal of Chemical Physics, 1997, 107, 3098-3120.	3.0	46
29	Instantaneous perspectives on solute relaxation in fluids: The common origins of nonpolar solvation dynamics and vibrational population relaxation. Journal of Chemical Physics, 1997, 107, 524-543.	3.0	53
30	The shortâ€time intramolecular dynamics of solutes in liquids. I. An instantaneousâ€normalâ€mode theory for friction. Journal of Chemical Physics, 1996, 105, 10050-10071.	3.0	60
31	Short-Time Dynamics of Solvation:Â Relationship between Polar and Nonpolar Solvation. The Journal of Physical Chemistry, 1996, 100, 1266-1282.	2.9	162
32	Nonreactive Dynamics in Solution:Â The Emerging Molecular View of Solvation Dynamics and Vibrational Relaxation. The Journal of Physical Chemistry, 1996, 100, 12981-12996.	2.9	625
33	Solvation and melting in large benzeneâ‹…(Ar)nclusters: Electronic spectral shifts and linewidths. Journal of Chemical Physics, 1996, 105, 1743-1753.	3.0	9
34	Liquid theory for the instantaneous normal modes of a liquid. II. Solutions. Journal of Chemical Physics, 1996, 104, 2987-3002.	3.0	18
35	The role of electronâ€“electron interactions in liquids. Journal of Chemical Physics, 1994, 100, 3028-3038.	3.0	3
36	Liquid theory for the instantaneous normal modes of a liquid. Journal of Chemical Physics, 1994, 100, 5123-5138.	3.0	78

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37	Instantaneous normal mode analysis of liquid water. Journal of Chemical Physics, 1994, 100, 6672-6683.	3.0	350
38	Collective fluctuations of conserved variables in liquids. Journal of Chemical Physics, 1993, 98, 3224-3239.	3.0	12
39	Optical properties of a chromophore embedded in a rareâ€gas cluster: Cluster size dependence and the approach to bulk properties. Journal of Chemical Physics, 1993, 99, 789-799.	3.0	24
40	Simulation of the band structure of liquids: A correction and some further developments. Journal of Chemical Physics, 1992, 97, 1980-1982.	3.0	17
41	Nonlinear aspects of band structure in liquids. II. Solute spectra. Journal of Chemical Physics, 1992, 97, 5696-5706.	3.0	14
42	The shortâ€time dynamics of molecular liquids. Instantaneousâ€normalâ€mode theory. Journal of Chemical Physics, 1992, 97, 8522-8535.	3.0	228
43	Nonlinear aspects of band structure in liquids. I. Neat liquids. Journal of Chemical Physics, 1992, 97, 5687-5695.	3.0	19
44	The spectrum of polarization fluctuations in an atomic liquid. Journal of Chemical Physics, 1991, 95, 2669-2682.	3.0	47
45	Zero-point vibrational energy of an adsorbed film. Journal of Low Temperature Physics, 1991, 84, 1-17.	1.4	11
46	Simulation of the band structure of liquids: Some calculation considerations and a test of the meanâ€spherical approximation. Journal of Chemical Physics, 1991, 95, 4418-4426.	3.0	13
47	Liquid theory for band structure in a liquid. III. The mean spherical approximation forpbands and the numerical solution of the mean spherical approximation for bothsandpbands. Journal of Chemical Physics, 1991, 94, 1426-1441.	3.0	17
48	The mobility of electrons in simple insulating fluids as a percolation problem. Journal of Chemical Physics, 1991, 94, 7360-7375.	3.0	33
49	The local field distribution in a fluid. Journal of Chemical Physics, 1990, 93, 2640-2657.	3.0	48
50	New insight into experimental probes of cluster melting. Journal of Chemical Physics, 1990, 93, 1358-1368.	3.0	69
51	Extensions to the instantaneous normal mode analysis of cluster dynamics: Diffusion constants and the role of rotations in clusters. Journal of Chemical Physics, 1990, 93, 1632-1640.	3.0	51
52	Instantaneous normal mode analysis as a probe of cluster dynamics. Journal of Chemical Physics, 1990, 93, 1332-1346.	3.0	92
53	Liquid theory for band structure in a liquid. II.porbitals and phonons. Journal of Chemical Physics, 1990, 92, 1923-1935.	3.0	91
54	Simulation of the electronic structure of an atom dissolved in a hardâ€sphere liquid. Journal of Chemical Physics, 1989, 91, 2470-2478.	3.0	16

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55	Liquid theory for band structure in a liquid. Journal of Chemical Physics, 1989, 91, 5613-5627.	3.0	43
56	The statistical mechanics of a liquid of breathing hard spheres. Journal of Chemical Physics, 1989, 90, 6809-6810.	3.0	3
57	The equation of state of hard spheres and the approach to random closest packing. Journal of Chemical Physics, 1988, 88, 1126-1133.	3.0	64
58	Simple models for the electronic structure of a molecule dissolved in a hardâ€sphere liquid. Journal of Chemical Physics, 1988, 88, 5781-5789.	3.0	16
59	The effect of an unusual type of quenched disorder on phase transitions: Illustration in a mixedâ€valence system. Journal of Chemical Physics, 1988, 88, 1134-1144.	3.0	9
60	The electronic structure of a liquid of interacting hydrogenic atoms: A prototype for expanded liquid metals. Journal of Chemical Physics, 1988, 89, 7388-7400.	3.0	18
61	On the origin of the phase transitions in a class of mixed valence compounds. Journal of Chemical Physics, 1987, 86, 7156-7163.	3.0	21
62	Tunnelingâ€induced disorder in solids. Journal of Chemical Physics, 1986, 84, 2315-2324.	3.0	23
63	A theory of percolation in liquids. Journal of Chemical Physics, 1986, 85, 391-400.	3.0	102
64	Observation of glassâ€like behavior in conjugated polymer molecules. Journal of Chemical Physics, 1984, 81, 2855-2856.	3.0	3
65	The statistical mechanics of a liquid of twoâ€state molecules. II. The competition between quantum mechanics and a condensed phase. Journal of Chemical Physics, 1984, 81, 6232-6243.	3.0	28
66	The statistical mechanics of a liquid of twoâ€state molecules. Journal of Chemical Physics, 1984, 80, 5764-5775.	3.0	41
67	The equilibrium statistical mechanics of cooperative intramolecular behavior in molecules with coupled conformational/electronic transitions. Journal of Chemical Physics, 1983, 79, 3928-3937.	3.0	19
68	Monte Carlo evaluation of path integrals: Quantal intramolecular degrees of freedom in solution. Journal of Chemical Physics, 1982, 77, 2108-2112.	3.0	27
69	Quantum effects on conformational equilibria. Journal of Chemical Physics, 1982, 76, 5134-5144.	3.0	2
70	Constrained impulsive molecular dynamics. Molecular Physics, 1981, 42, 1233-1143.	1.7	23