Raphael David Levine

List of Publications by Citations

364 papers	11,965 citations	57 h-index	90 g-index
373 ext. papers	12,724 ext. citations	4.9 avg, IF	6.28 L-index

#	Paper	IF	Citations
364	Algebraic approach to molecular rotation-vibration spectra. I. Diatomic molecules. *Journal of Chemical Physics*, **1982**, 77, 3046-3055	3.9	370
363	Multi-Electronic-State Molecular Dynamics: A Wave Function Approach with Applications. *The Journal of Physical Chemistry*, **1996**, 100, 7884-7895		335
362	An electronic time scale in chemistry. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 6793-8	11.5	305
361	Algebraic approach to molecular rotation-vibration spectra. II. Triatomic molecules. *Journal of Chemical Physics*, **1983**, 79, 2515-2536	3.9	262
360	Algebraic Theory of Molecules **1995**,		248
359	Connection between the maximal entropy and the scattering theoretic analyses of collision processes. *Physical Review A*, **1978**, 18, 89-116	2.6	221
358	Entropy and Chemical Change. II. Analysis of Product Energy Distributions: Temperature and Entropy Deficiency. *Journal of Chemical Physics*, **1972**, 57, 5427-5447	3.9	187
357	A unified algebraic model description for interacting vibrational modes in ABA molecules. *Journal of Chemical Physics*, **1984**, 81, 5986-5997	3.9	175
356	Vibrational energy transfer in molecular collisions: An information theoretic analysis and synthesis. *Journal of Chemical Physics*, **1975**, 63, 4261-4279	3.9	164
355	Entropy and chemical change. III. The maximal entropy (subject to constraints) procedure as a dynamical theory. *Journal of Chemical Physics*, **1977**, 67, 4321-4339	3.9	164
354	Information Theory Approach to Molecular Reaction Dynamics. *Annual Review of Physical Chemistry*, **1978**, 29, 59-92	15.7	164
353	Dynamical aspects of stereochemistry. *The Journal of Physical Chemistry*, **1987**, 91, 5365-5377		146
352	Entropy and Chemical Change. I. Characterization of Product (and Reactant) Energy Distributions in Reactive Molecular Collisions: Information and Entropy Deficiency. *Journal of Chemical Physics*, **1972**, 57, 434-449	3.9	137
351	Delayed ionization and fragmentation en route to thermionic emission: statistics and dynamics. *Annual Review of Physical Chemistry*, **2000**, 51, 65-98	15.7	130
350	Dimensional scaling as a symmetry operation. *Journal of Chemical Physics*, **1989**, 91, 7791-7796	3.9	130
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347	A molecular logic gate. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 410-4	11.5	114
346	All-DNA finite-state automata with finite memory. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 21996-2001	11.5	112
345	Quantum dots as chemical building blocks: elementary theoretical considerations. *ChemPhysChem*, **2001**, 2, 20-36	3.2	111
344	Laser steered ultrafast quantum dynamics of electrons in LiH. *Physical Review Letters*, **2007**, 99, 183902	7.4	110
343	Intermolecular and Intramolecular Logic Gates. *Journal of Physical Chemistry B*, **2001**, 105, 5589-5591	3.4	108
342	Molecular Collision Dynamics on Several Electronic States. *Journal of Physical Chemistry A*, **1997**, 101, 6389-6402	2.8	106
341	Transition-strength fluctuations and the onset of chaotic motion. *Physical Review Letters*, **1986**, 57, 2879-2882	7.4	103
340	Nonstationary Electronic States and Site-Selective Reactivity. *Journal of Physical Chemistry A*, **1997**, 101, 7702-7710	2.8	97
339	Cross sections for rotational energy transfer: An information-theoretic synthesis. *Journal of Chemical Physics*, **1976**, 64, 808-817	3.9	97
338	Consistent Inference of Probabilities for Reproducible Experiments. *Physical Review Letters*, **1984**, 52, 1357-1360	7.4	93
337	Surprisal analysis and probability matrices for rotational energy transfer. *Journal of Chemical Physics*, **1976**, 64, 796-807	3.9	88
336	The effect of reagent energy on chemical reaction rates: An information theoretic analysis. *Journal of Chemical Physics*, **1975**, 63, 4280-4303	3.9	84
335	Pump and probe ultrafast electron dynamics in LiH: a computational study. *New Journal of Physics*, **2008**, 10, 025019	2.9	83
334	Homogeneous bottleneck model of matrix-assisted ultraviolet laser desorption of large molecules. *Rapid Communications in Mass Spectrometry*, **1990**, 4, 228-233	2.2	80
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330	Long time stability of very high Rydberg states of vibrationally excited molecules. *Physical Review Letters*, **1994**, 72, 1435-1438	7.4	76

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328	Dynamics of very high Rydberg states of aromatic molecules. *Journal of Chemical Physics*, **1993**, 98, 1744-1747	3.9	75
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320	Observations of Molecular Rydberg State Decay for n = 10-200. *The Journal of Physical Chemistry*, **1994**, 98, 3472-3477		64
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