David J Tannor

List of Publications by Year
in descending order

57	4,659	201674 27	138484 58
papers	citations	h-index	g-index

60	60	60	2314
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Control of selectivity of chemical reaction via control of wave packet evolution. Journal of Chemical Physics, 1985, 83, 5013-5018.	3.0	912
2	Coherent pulse sequence induced control of selectivity of reactions: Exact quantum mechanical calculations. Journal of Chemical Physics, 1986, 85, 5805-5820.	3.0	639
3	Simple aspects of Raman scattering. The Journal of Physical Chemistry, 1982, 86, 1822-1833.	2.9	611
4	Coherent Pulse Sequence Control of Product Formation in Chemical Reactions. Advances in Chemical Physics, 2007, , 441-523.	0.3	181
5	Controlled dissociation of I2 via optical transitions between the X and B electronic states. Chemical Physics, 1993, 172, 85-98.	1.9	158
6	Simple and robust extension of the stimulated Raman adiabatic passage technique toN-level systems. Physical Review A, 1997, 56, 4929-4937.	2.5	147
7	SEMICLASSICALCALCULATION OFCHEMICALREACTIONDYNAMICS VIAWAVEPACKETCORRELATIONFUNCTIONS. Annual Review of Physical Chemistry, 2000, 51, 553-600.	10.8	147
8	Excitation without demolition: Radiative excitation of ground-surface vibration by impulsive stimulated Raman scattering with damage control. Physical Review Letters, 1992, 69, 2172-2175.	7.8	136
9	Wave packet correlation function formulation of scattering theory: The quantum analog of classical Sâ€matrix theory. Journal of Chemical Physics, 1993, 98, 3884-3893.	3.0	135
10	Bohmian mechanics with complex action: A new trajectory-based formulation of quantum mechanics. Journal of Chemical Physics, 2006, 125, 231103.	3.0	135
11	Laser cooling of molecular internal degrees of freedom by a series of shaped pulses. Journal of Chemical Physics, 1993, 99, 196-210.	3.0	133
12	Loading a Bose-Einstein condensate onto an optical lattice: An application of optimal control theory to the nonlinear SchrÃ¶dinger equation. Physical Review A, 2002, 66, .	2.5	128
13	Laser cooling of internal degrees of freedom. II. Journal of Chemical Physics, 1997, 106, 1435-1448.	3.0	108
14	Optimal control with accelerated convergence: Combining the Krotov and quasi-Newton methods. Physical Review A, 2011, 83, .	2.5	80
15	On the Interplay of Control Fields and Spontaneous Emission in Laser Cooling. Journal of Physical Chemistry A, 1999, 103, 10359-10363.	2.5	72
16	Rotational state dependence of pyrazine fluorescence: Initial decays for the vibrationless 1B3u state. Journal of Chemical Physics, 1985, 82, 1067-1072.	3.0	65
17	On the second-order corrections to the quantum canonical equilibrium density matrix. Journal of Chemical Physics, 2000, 113, 1380-1390.	3.0	65
18	Photoabsorption and photoemission of ozone in the Hartley band. Journal of Chemical Physics, 1988, 89, 6667-6675.	3.0	64

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19	Optimal pulse sequences for population transfer in multilevel systems. Physical Review A, 1999, 60, 3081-3090.	2.5	63
20	Dynamics of triatomic photodissociation in the interaction representation. I. Methodology. Journal of Chemical Physics, 1991, 95, 1721-1737.	3.0	62
21	Phase space distribution function formulation of the method of reactive flux: Memory friction. Journal of Chemical Physics, 1995, 103, 6013-6020.	3.0	49
22	Optical paralysis in electronically congested systems: application to large-amplitude vibrational motion of ground state Na2. Chemical Physics, 1997, 221, 67-76.	1.9	42
23	Nested interaction representations in time dependent quantum mechanics. Journal of Chemical Physics, 1992, 96, 2998-3009.	3.0	35
24	Quantum computation via local control theory: Direct sum vs. direct product Hilbert spaces. Chemical Physics, 2006, 322, 87-97.	1.9	29
25	Picosecond CARS as a probe of ground electronic state intramolecular vibrational redistribution. Journal of Chemical Physics, 1985, 83, 6158-6164.	3.0	28
26	Complete Reconstruction of the Wave Function of a Reacting Molecule by Four-Wave Mixing Spectroscopy. Physical Review Letters, 2011, 106, 170405.	7.8	28
27	Optimal Control of Multiphoton Excitation:â€‰ A Black Box or a Flexible Toolkit?. Journal of Physical Chemistry A, 1998, 102, 4301-4309.	2.5	25
28	Quantum adiabatic switching. Journal of Chemical Physics, 1993, 98, 3168-3178.	3.0	24
29	Correlation function formulation for the state selected total reaction probability. Journal of Chemical Physics, 1998, 109, 3028-3036.	3.0	24
30	Communication: Overcoming the root search problem in complex quantum trajectory calculations. Journal of Chemical Physics, 2014, 140, 041105.	3.0	23
31	Controllability on relaxation-free subspaces: On the relationship between adiabatic population transfer and optimal control. Physical Review A, 2012, 85, .	2.5	22
32	Ammonia: Dynamical modeling of the absorption spectrum. Journal of Chemical Physics, 1990, 92, 5919-5934.	3.0	20
33	Quantum Control Landscape for a Î›â€atom in the Vicinity of Secondâ€Order Traps. Israel Journal of Chemistry, 2012, 52, 467-472.	2.3	20
34	Controllability of population transfer to degenerate states: Analytical and numerical results for a four-level system. Physical Review A, 2002, 66, .	2.5	19
35	The von Neumann basis in non-Cartesian coordinates: Application to floppy triatomic molecules. Journal of Chemical Physics, 2014, 141, 234106.	3.0	19
36	Cumulative reaction probability in terms of reactant-product wave packet correlation functions. Journal of Chemical Physics, 1999, 110, 2761-2770.	3.0	17

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37	Understanding the origin of rotational distributions in triatomic photodissociation: A kâ€“j wave packet study of ICN. Journal of Chemical Physics, 1992, 97, 6300-6308.	3.0	16
38	Quantum Dynamics in Phase Space using Projected von Neumann Bases. Journal of Physical Chemistry A, 2016, 120, 3296-3308.	2.5	14
39	A novel wave packet description of electron transfer and dissociation in molecule/surface reactive scattering. Journal of Chemical Physics, 1995, 103, 10764-10778.	3.0	13
40	Path-integral derivations of complex trajectory methods. Physical Review A, 2011, 83, .	2.5	13
41	Wave packet evolution in isolated pyrazine molecules: Coherence triumphs over chaos. Journal of Chemical Physics, 1985, 82, 1073-1078.	3.0	12
42	Phase Space Approach to Dissipative Molecular Dynamics. Advances in Chemical Physics, 2007, , 219-398.	0.3	12
43	Control of quantum transmission is trap free. Canadian Journal of Chemistry, 2014, 92, 157-159.	1.1	12
44	Actors, spectators and control. Nature, 1994, 369, 445-446.	27.8	11
45	Calculating Multidimensional Discrete Variable Representations from Cubature Formulasâ€. Journal of Physical Chemistry A, 2006, 110, 5395-5410.	2.5	11
46	Commuting extensions and cubature formulae. Numerische Mathematik, 2005, 101, 479-500.	1.9	5
47	Wavepacket and potential reconstruction by four-wave mixing spectroscopy: preliminary application to polyatomic molecules. Faraday Discussions, 2011, 153, 131.	3.2	5
48	An action principle for complex quantum trajectories. Molecular Physics, 2012, 110, 897-908.	1.7	5
49	Communication: Systematic elimination of Stokes divergences emanating from complex phase space caustics. Journal of Chemical Physics, 2018, 148, 101102.	3.0	4
50	Multivalued classical mechanics arising from singularity loops in complex time. Journal of Chemical Physics, 2018, 148, 084108.	3.0	4
51	Analysis and control of small isolated molecular systems. , 2007, , 25-152.		4
52	Sharpening accepted thermodynamic wisdom via quantum control: or cooling to an internal temperature of zero by external coherent control fields without spontaneous emission. Journal of Modern Optics, 2002, 49, 2297-2307.	1.3	3
53	Multi-dimensional wavepacket and potential reconstruction by resonant coherent anti-Stokes Raman scattering: Application to H2O and HOD. Journal of Chemical Physics, 2012, 136, 214107.	3.0	3
54	A three-step model of high harmonic generation using complex classical trajectories. Annals of Physics, 2021, 427, 168288.	2.8	3

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55	Excited-state wavepacket and potential reconstruction by coherent anti-Stokes Raman scattering. Physical Chemistry Chemical Physics, 2015, 17, 2297-2310.	2.8	2
56	Control of concerted back-to-back double ionization dynamics in helium. Journal of Chemical Physics, 2021, 155, 144105.	3.0	1
57	Coherent control of molecular processes application to cooling internal degrees of freedom. AIP Conference Proceedings, 2000, , .	0.4	0