

Eric J Heller

List of Publications by Year in descending order

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62
papers

5,977
citations

257450

24
h-index

133252

59
g-index

62
all docs

62
docs citations

62
times ranked

2759
citing authors

#	ARTICLE	IF	CITATIONS
1	Bragg Scattering from a Random Potential. <i>Physical Review Letters</i> , 2022, 128, .	7.8	4
2	Reducing anomalous reflection from complex absorbing potentials: A semiclassical approach. <i>Physical Review A</i> , 2021, 103, .	2.5	4
3	Propagation of waves in high Brillouin zones: Chaotic branched flow and stable superwires. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	5
4	The momentum of models. <i>Journal of Chemical Physics</i> , 2021, 155, 170902.	3.0	2
5	Periodic orbit scar in wavepacket propagation. <i>International Journal of Modern Physics C</i> , 2019, 30, 1950026.	1.7	1
6	Lazy electrons in graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18316-18321.	7.1	7
7	Schrödinger Correspondence Applied to Crystals. <i>Journal of Physical Chemistry A</i> , 2019, 123, 4379-4388.	2.5	5
8	Dust and gas emission from cometary nuclei: the case of comet 67P/Churyumov-Gerasimenko. <i>Advances in Physics: X</i> , 2018, 3, 1404436.	4.1	8
9	Reassessing Graphene Absorption and Emission Spectroscopy. <i>Nano Letters</i> , 2017, 17, 6077-6082.	9.1	10
10	Characterizing Time Irreversibility in Disordered Fermionic Systems by the Effect of Local Perturbations. <i>Physical Review Letters</i> , 2017, 119, 016802.	7.8	15
11	Strong quantum scarring by local impurities. <i>Scientific Reports</i> , 2016, 6, 37656.	3.3	24
12	Theory of Graphene Raman Scattering. <i>ACS Nano</i> , 2016, 10, 2803-2818.	14.6	94
13	Directed HK propagator. <i>Journal of Chemical Physics</i> , 2015, 143, 124102.	3.0	3
14	Raman Scattering in Carbon Nanosystems: Solving Polyacetylene. <i>ACS Central Science</i> , 2015, 1, 40-49.	11.3	19
15	Collision dynamics of polyatomic molecules containing carbon rings at low temperatures. <i>Journal of Chemical Physics</i> , 2014, 141, 104317.	3.0	10
16	Communication: HK propagator uniformized along a one-dimensional manifold in weakly anharmonic systems. <i>Journal of Chemical Physics</i> , 2014, 141, 181102.	3.0	6
17	Ballistic versus diffusive transport in graphene. <i>Physical Review B</i> , 2013, 88, .	3.2	16
18	Stability of Branched Flow from a Quantum Point Contact. <i>Physical Review Letters</i> , 2013, 111, 236804.	7.8	20

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19	Semiclassical deconstruction of quantum states in graphene. <i>Physical Review B</i> , 2013, 88, .	3.2	9
20	Optimal control of quantum revival. <i>European Physical Journal B</i> , 2013, 86, 1.	1.5	8
21	Optimal local control of coherent dynamics in custom-made nanostructures. <i>Physical Review B</i> , 2013, 87, .	3.2	14
22	Comment on "Screening model of metallic nonideal contacts in the integer quantized Hall regime". <i>Physical Review B</i> , 2011, 84, .	3.2	0
23	Theory of the quantum Hall effect in finite graphene devices. <i>Physical Review B</i> , 2010, 81, .	3.2	13
24	Self-consistent calculation of electric potentials in Hall devices. <i>Physical Review B</i> , 2010, 81, .	3.2	14
25	Imaging and manipulating electrons in a one-dimensional quantum dot with Coulomb blockade microscopy. <i>Physical Review B</i> , 2010, 81, .	3.2	28
26	Classical and quantum analysis of quasideviation in grazing atom-surface collisions. <i>Physical Review A</i> , 2009, 79, .	2.5	16
27	Electron wrangling in quantum corrals. <i>Nature Physics</i> , 2008, 4, 443-444.	16.7	6
28	Investigating interaction-induced chaos using time-dependent density-functional theory. <i>Physical Review A</i> , 2008, 77, .	2.5	4
29	Inflationary dynamics for matrix eigenvalue problems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 7631-7635.	7.1	4
30	Quasideviation. <i>Molecular Physics</i> , 2006, 104, 127-145.	1.7	10
31	Statistical properties of eigenstates beyond random matrix theory. <i>Molecular Physics</i> , 2006, 104, 1207-1216.	1.7	3
32	Multiple-scattering theory for two-dimensional electron gases in the presence of spin-orbit coupling. <i>Physical Review B</i> , 2006, 73, .	3.2	25
33	Semiclassical theory of coherence and decoherence. <i>Physical Review A</i> , 2003, 68, .	2.5	55
34	Similarity transformed semiclassical dynamics. <i>Journal of Chemical Physics</i> , 2003, 119, 12153-12162.	3.0	24
35	Branching and Fringing in Microstructure Electron Flow. <i>International Journal of Modern Physics B</i> , 2003, 17, 3977-3987.	2.0	18
36	Determination of bound-free dissociative couplings via classical Fourier coefficients. <i>Journal of Chemical Physics</i> , 2002, 117, 9574-9579.	3.0	0

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37	A Perturbative Approach to Vibrational Predissociation Rates: A Application to ArHF. Journal of Physical Chemistry B, 2002, 106, 8100-8107.	2.6	4
38	Semiclassical Quantization Using Invariant Tori: A Gradient-Descent Approach. Journal of Physical Chemistry A, 2001, 105, 2803-2813.	2.5	5
39	Air juggling and other tricks. Nature, 2001, 412, 33-34.	27.8	8
40	Scattering Theory of Kondo Mirages and Observation of Single Kondo Atom Phase Shift. Physical Review Letters, 2001, 86, 2392-2395.	7.8	85
41	Parametric evolution for a deformed cavity. Physical Review E, 2001, 63, 046207.	2.1	18
42	Electrons in the looking glass. Nature, 2000, 403, 489-491.	27.8	2
43	COHERENT STATES, CHAOS, AND INFORMATION. , 1994, , .		0
44	Bound-State Eigenfunctions of Classically Chaotic Hamiltonian Systems: Scars of Periodic Orbits. Physical Review Letters, 1984, 53, 1515-1518.	7.8	1,269
45	Excited state geometry changes from preresonance Raman intensities: Isoprene and hexatriene. Journal of Chemical Physics, 1982, 77, 3857-3866.	3.0	203
46	Polyatomic Raman scattering for general harmonic potentials. Journal of Chemical Physics, 1982, 77, 202-218.	3.0	405
47	Simple aspects of Raman scattering. The Journal of Physical Chemistry, 1982, 86, 1822-1833.	2.9	611
48	Exact time-dependent wave packet propagation: Application to the photodissociation of methyl iodide. Journal of Chemical Physics, 1982, 76, 3035-3044.	3.0	266
49	Classical trajectory approach to photodissociation: The Wigner method. Journal of Chemical Physics, 1981, 75, 186-188.	3.0	145
50	Multidimensional wave functions from classical trajectories. Journal of Chemical Physics, 1981, 75, 3916-3924.	3.0	92
51	Errors in the Wigner approach to quantum dynamics. Journal of Chemical Physics, 1981, 75, 1048-1050.	3.0	33
52	Normal mode spectra in pure local mode molecules. Journal of Chemical Physics, 1980, 73, 626-628.	3.0	33
53	Molecular spectra, Fermi resonances, and classical motion. Journal of Chemical Physics, 1980, 73, 4720-4735.	3.0	169
54	Quantum intramolecular dynamics: Criteria for stochastic and nonstochastic flow. Journal of Chemical Physics, 1980, 72, 1337-1347.	3.0	141

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55	Molecular spectra, Fermi resonances, and classical motion: Example of CO ₂ . Journal of Chemical Physics, 1979, 71, 4759-4760.	3.0	30
56	Semiclassical Gaussian basis set method for molecular vibrational wave functions. Journal of Chemical Physics, 1979, 71, 3383-3395.	3.0	240
57	Quantum corrections to classical photodissociation models. Journal of Chemical Physics, 1978, 68, 2066-2075.	3.0	606
58	Photofragmentation of symmetric triatomic molecules: Time dependent picture. Journal of Chemical Physics, 1978, 68, 3891-3896.	3.0	327
59	Generalized theory of semiclassical amplitudes. Journal of Chemical Physics, 1977, 66, 5777-5785.	3.0	45
60	Phase space interpretation of semiclassical theory. Journal of Chemical Physics, 1977, 67, 3339-3351.	3.0	135
61	Classical matrix limit of wave packet dynamics. Journal of Chemical Physics, 1976, 65, 4979-4989.	3.0	181
62	Wigner phase space method: Analysis for semiclassical applications. Journal of Chemical Physics, 1976, 65, 1289-1298.	3.0	420