

Jacob Katriel

List of Publications by Year in descending order

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79
papers

1,002
citations

471509

17
h-index

501196

28
g-index

79
all docs

79
docs citations

79
times ranked

433
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical Interpretation of Hund's Rule. <i>Advances in Quantum Chemistry</i> , 1977, 10, 143-185.	0.8	91
2	Nonideal lasers, nonclassical light, and deformed photon states. <i>Physical Review A</i> , 1994, 49, 5149-5151.	2.5	67
3	Concerning the chemical potential of few-electron systems. <i>Journal of Chemical Physics</i> , 1981, 74, 2397-2401.	3.0	44
4	Relativistic effects on information measures for hydrogen-like atoms. <i>Journal of Computational and Applied Mathematics</i> , 2010, 233, 1399-1415.	2.0	44
5	Squeezed and coherent states of fractional photons. <i>Physical Review D</i> , 1987, 35, 1248-1254.	4.7	40
6	Hydrogen molecular ion in a high magnetic field. <i>Physical Review A</i> , 1980, 21, 413-417.	2.5	38
7	Critical screening in the one- and two-electron Yukawa atoms. <i>Physical Review A</i> , 2018, 97, .	2.5	37
8	Coefficients of fractional parentage in the $L\hat{S}$ coupling scheme. <i>Journal of Mathematical Physics</i> , 1988, 29, 1368-1388.	1.1	36
9	Hyperspherical functions with arbitrary permutational symmetry. <i>Physical Review A</i> , 1994, 49, 833-846.	2.5	36
10	Orbital correspondence analysis in maximum symmetry: Formulation and conceptual framework. <i>Theoretica Chimica Acta</i> , 1975, 40, 1-15.	0.8	30
11	Intramolecular electronic energy transfer via exchange interaction in bichromophoric molecules. <i>Chemical Physics Letters</i> , 1983, 102, 88-94.	2.6	29
12	The virial theorem for the smoothly and sharply, penetrably and impenetrably confined hydrogen atom. <i>Journal of Chemical Physics</i> , 2012, 137, 114109.	3.0	27
13	Non-spurious harmonic oscillator states with arbitrary symmetry. <i>Annals of Physics</i> , 1989, 196, 135-149.	2.8	18
14	A study of the adiabatic connection for two-electron systems. <i>Journal of Chemical Physics</i> , 2004, 121, 12179.	3.0	18
15	A comparative study of two-electron systems with screened Coulomb potentials. <i>Annals of Physics</i> , 2018, 397, 192-212.	2.8	18
16	Fermi and Coulomb correlations in the $21\ S$ state of the helium isoelectronic sequence. <i>Theoretica Chimica Acta</i> , 1977, 45, 61-67.	0.8	17
17	Bonding criteria for diatomic molecular orbitals and inter-relations among them. <i>Theoretica Chimica Acta</i> , 1977, 46, 173-181.	0.8	17
18	Generalized Holstein-Primakoff squeezed states for $SU(n)$. <i>Physical Review D</i> , 1987, 35, 2601-2602.	4.7	17

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19	A comparison between hydrogenic and Thomas-Fermi expectation values. Journal of Chemical Physics, 1981, 74, 1221-1224.	3.0	16
20	Effect of the one-body potential on interelectronic correlation in two-electron systems. Journal of Chemical Physics, 2005, 123, 104104.	3.0	15
21	Generalized Hiller-Sucher-Feinberg identity. Physical Review A, 1980, 21, 1067-1068.	2.5	14
22	Possible broken supersymmetry behind the periodic table. Chemical Physics Letters, 1982, 87, 315-319.	2.6	14
23	Optical bistability in molecular systems exhibiting nonlinear absorption. Physical Review A, 1987, 35, 2175-2183.	2.5	14
24	The cyclic isomer of CO ₂ . Journal of Chemical Physics, 1980, 73, 4517-4520.	3.0	13
25	An eikonal approximation for non linear resonators exhibiting bistability. Optics Communications, 1984, 48, 367-373.	2.1	13
26	Products of class operators of the symmetric group. International Journal of Quantum Chemistry, 1989, 35, 461-470.	2.0	13
27	Binding energies of the lithium isoelectronic sequence approaching the critical charge. Physical Review A, 2012, 86, .	2.5	13
28	On the divergence of perturbation theory for anharmonic oscillators. Physics Letters, Section A: General, Atomic and Solid State Physics, 1979, 72, 94-96.	2.1	12
29	Spurious complex energies for confining potentials in the complex-coordinate method. Chemical Physics Letters, 1984, 105, 194-196.	2.6	12
30	A partial recurrence relation for reduced class coefficients of the symmetric group. International Journal of Quantum Chemistry, 1991, 39, 593-604.	2.0	12
31	Reduction of the excited state into the ground state of a super-Hamiltonian. International Journal of Quantum Chemistry, 1983, 23, 1767-1780.	2.0	11
32	Nonuniversality of commonly used correlation-energy density functionals. Journal of Chemical Physics, 2006, 124, 234111.	3.0	11
33	Hund's rule in the $(1s^2s)1,3S$ states of the two-electron Debye atom. Physics of Plasmas, 2018, 25, .	1.9	11
34	Explicit expressions for the central characters of the symmetric group. Discrete Applied Mathematics, 1996, 67, 149-156.	0.9	10
35	A nonlinear Bogoliubov transformation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 307, 1-7.	2.1	10
36	Quantum defects at the critical charge. Journal of Chemical Physics, 2013, 138, 224305.	3.0	10

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37	Atomic <i>i</i> vs. <i>i</i> quantum dot open shell spectra. <i>Journal of Chemical Physics</i> , 2017, 146, 064104.	3.0	10
38	A general method for proving the non-trivial linear homogeneous partition inequalities. <i>Ramanujan Journal</i> , 2020, 51, 245-266.	0.7	10
39	A Hohenberg-Kohn theorem for non-local potentials. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1977, 61, 19-21.	2.1	9
40	Coherent states and combinatorics. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, S200-S203.	1.4	9
41	Hund's rule in the doubly excited states of the helium isoelectronic. <i>International Journal of Quantum Chemistry</i> , 2012, 112, 2880-2893.	2.0	8
42	Approach towards the critical charge of some excited states of the Be isoelectronic series. <i>Physical Review A</i> , 2014, 90, .	2.5	8
43	Asymptotically trivial linear homogeneous partition inequalities. <i>Journal of Number Theory</i> , 2018, 184, 107-121.	0.4	8
44	Singlet vs. triplet interelectronic repulsion in confined atoms. <i>Chemical Physics Letters</i> , 2018, 702, 106-110.	2.6	8
45	Products of class-sums of the symmetric group: Generalizing the recurrence relations. <i>International Journal of Quantum Chemistry</i> , 1993, 47, 243-260.	2.0	7
46	The splitting of atomic orbitals with a common principal quantum number revisited: <i>np</i> vs. <i>ns</i> . <i>Journal of Chemical Physics</i> , 2012, 136, 144112.	3.0	7
47	The Gaussian potential: Bound states in the continuum?. <i>Theoretica Chimica Acta</i> , 1976, 41, 321-328.	0.8	6
48	The q-Zassenhaus formula. <i>Letters in Mathematical Physics</i> , 1996, 37, 11-13.	1.1	6
49	Classical limit of the Korteweg-de Vries hierarchy of isospectral transformations. <i>Physical Review D</i> , 1985, 32, 884-890.	4.7	5
50	Nonlinear complex eikonal approximation: Optical bistability in absorbing media. <i>Physical Review A</i> , 1987, 35, 1192-1209.	2.5	5
51	The Korteweg-de Vries hierarchy of isospectral transformations: Towards a general explicit expression. <i>Journal of Mathematical Physics</i> , 1987, 28, 1344-1350.	1.1	5
52	Eigenvalues of single-cycle class-sums in the symmetric group. II. <i>International Journal of Quantum Chemistry</i> , 1993, 48, 125-134.	2.0	5
53	Correlation effects close to the ground state critical charge of the two-electron atom. <i>Chemical Physics Letters</i> , 2021, 782, 139030.	2.6	5
54	Eigenvalues of single-cycle class-sums in the symmetric group. <i>International Journal of Quantum Chemistry</i> , 1992, 41, 147-151.	2.0	4

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55	A no- ϵ go theorem for a Lie-consistent q -Campbell-Baker-Hausdorff expansion. Journal of Mathematical Physics, 1994, 35, 6172-6178.	1.1	4
56	Products of Class-Sums of the Symmetric Group: Elimination of Two-Index Cycles. Israel Journal of Chemistry, 1991, 31, 287-295.	2.3	3
57	Low and high asymptotics along atomic isoelectronic sequences: configurations with n^2 open shells. Physica Scripta, 2019, 94, 055401.	2.5	3
58	Asymptotic quantum defect of singly excited two-electron atoms at the critical charge. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 075004.	1.5	3
59	Class-sum products in the symmetric group: Combinatorial interpretation of the reduced class coefficients. International Journal of Quantum Chemistry, 1998, 68, 103-118.	2.0	2
60	A Multitude of Expressions for the Stirling Numbers of the First Kind. Integers, 2010, 10, .	0.3	2
61	Asymptotic behavior of two-electron expectation values in two-electron excited states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 126007.	2.1	2
62	Nonspurious harmonic oscillator states in single particle coordinates. Journal of Mathematical Physics, 1990, 31, 1164-1166.	1.1	1
63	Products of class sums of the symmetric group: Rules of partial elimination. International Journal of Quantum Chemistry, 1997, 63, 961-979.	2.0	1
64	Minimal set of class-sums characterizing the ordinary irreducible representations of the symmetric group, and the Tarry-Escott problem. Discrete Mathematics, 1997, 173, 91-95.	0.7	1
65	Many-particle Dirac identities for arbitrary elementary spins. International Journal of Quantum Chemistry, 2000, 78, 407-411.	2.0	1
66	Entropy of Bounding Tori. Entropy, 2010, 12, 953-960.	2.2	1
67	Generating q -Commutator Identities and the q -BCH Formula. Advances in Mathematical Physics, 2016, 2016, 1-26.	0.8	1
68	A physically motivated derivation of the Laplacian in terms of the total angular momentum operator. European Journal of Physics, 2019, 40, 045401.	0.6	1
69	Asymptotic oscillator strength at the critical charge. Chemical Physics Letters, 2020, 738, 136897.	2.6	1
70	An undergraduate-oriented comment about inverting spectral data to determine the interatomic potential. American Journal of Physics, 2020, 88, 1147-1150.	0.7	1
71	Excited states of the Gaussian two-electron quantum dot. European Physical Journal D, 2021, 75, 1.	1.3	1
72	On the non-existence of maxima in variational computations containing non-linear parameters. International Journal of Quantum Chemistry, 1978, 13, 149-153.	2.0	0

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73	Products of arbitrary class-sums in the symmetric group. International Journal of Quantum Chemistry, 1998, 70, 429-440.	2.0	0
74	A quarter century with conjugacy class sums. , 2015, , .		0
75	Comment on the spherical quantum dot with interaction effects. International Journal of Modern Physics B, 2017, 31, 1750115.	2.0	0
76	Open-shell quantum dots and atoms in nano-cavities. AIP Conference Proceedings, 2019, , .	0.4	0
77	First and Second Derivatives of the Chemical Potential for Noninteracting Particles. Journal of Low Temperature Physics, 2021, 202, 263-268.	1.4	0
78	Naïve Bohr-type quantization for power-law potentials. American Journal of Physics, 2021, 89, 557-558.	0.7	0
79	Time Dependence of Exotic Coherent States. , 1994, , 245-252.		0