Jacob Katriel

List of Publications by Year
in descending order

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	First and Second Derivatives of the Chemical Potential for Noninteracting Particles. Journal of Low Temperature Physics, 2021, 202, 263-268.	1.4	0
2	NaÃ¯ve Bohr-type quantization for power-law potentials. American Journal of Physics, 2021, 89, 557-558.	0.7	0
3	Excited states of the Gaussian two-electron quantum dot. European Physical Journal D, 2021, 75, 1.	1.3	1
4	Correlation effects close to the ground state critical charge of the two-electron atom. Chemical Physics Letters, 2021, 782, 139030.	2.6	5
5	A general method for proving the non-trivial linear homogeneous partition inequalities. Ramanujan Journal, 2020, 51, 245-266.	0.7	10
6	Asymptotic oscillator strength at the critical charge. Chemical Physics Letters, 2020, 738, 136897.	2.6	1
7	An undergraduate-oriented comment about inverting spectral data to determine the interatomic potential. American Journal of Physics, 2020, 88, 1147-1150.	0.7	1
8	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
9	Open-shell quantum dots and atoms in nano-cavities. AIP Conference Proceedings, 2019, , .	0.4	0
10	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
11	Low and highZasymptotics along atomic isoelectronic sequences: configurations withnpnâ€²popen shells. Physica Scripta, 2019, 94, 055401.	2.5	3
12	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
13	Critical screening in the one- and two-electron Yukawa atoms. Physical Review A, 2018, 97, .	2.5	37
14	Asymptotically trivial linear homogeneous partition inequalities. Journal of Number Theory, 2018, 184, 107-121.	0.4	8
15	Hund's rule in the (1s2s)1,3S states of the two-electron Debye atom. Physics of Plasmas, 2018, 25, .	1.9	11
16	Singlet vs. triplet interelectronic repulsion in confined atoms. Chemical Physics Letters, 2018, 702, 106-110.	2.6	8
17	A comparative study of two-electron systems with screened Coulomb potentials. Annals of Physics, 2018, 397, 192-212.	2.8	18
18	Comment on the spherical quantum dot with interaction effects. International Journal of Modern Physics B, 2017, 31, 1750115.	2.0	0

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19	Atomic vs. quantum dot open shell spectra. Journal of Chemical Physics, 2017, 146, 064104.	3.0	10
20	Generatingq-Commutator Identities and theq-BCH Formula. Advances in Mathematical Physics, 2016, 2016, 1-26.	0.8	1
21	A quarter century with conjugacy class sums. , 2015, , .		0
22	Approach towards the critical charge of some excited states of the Be isoelectronic series. Physical Review A, 2014, 90, .	2.5	8
23	Quantum defects at the critical charge. Journal of Chemical Physics, 2013, 138, 224305.	3.0	10
24	Binding energies of the lithium isoelectronic sequence approaching the critical charge. Physical Review A, 2012, 86, .	2.5	13
25	The virial theorem for the smoothly and sharply, penetrably and impenetrably confined hydrogen atom. Journal of Chemical Physics, 2012, 137, 114109.	3.0	27
26	The splitting of atomic orbitals with a common principal quantum number revisited: np vs. ns. Journal of Chemical Physics, 2012, 136, 144112.	3.0	7
27	Hund's rule in the doubly excited states of the helium isoelectronic. International Journal of Quantum Chemistry, 2012, 112, 2880-2893.	2.0	8
28	Relativistic effects on information measures for hydrogen-like atoms. Journal of Computational and Applied Mathematics, 2010, 233, 1399-1415.	2.0	44
29	A Multitude of Expressions for the Stirling Numbers of the First Kind. Integers, 2010, 10, .	0.3	2
30	Entropy of Bounding Tori. Entropy, 2010, 12, 953-960.	2.2	1
31	Nonuniversality of commonly used correlation-energy density functionals. Journal of Chemical Physics, 2006, 124, 234111.	3.0	11
32	Effect of the one-body potential on interelectronic correlation in two-electron systems. Journal of Chemical Physics, 2005, 123, 104104.	3.0	15
33	A study of the adiabatic connection for two-electron systems. Journal of Chemical Physics, 2004, 121, 12179.	3.0	18
34	A nonlinear Bogoliubov transformation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 307, 1-7.	2.1	10
35	Coherent states and combinatorics. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S200-S203.	1.4	9
36	Many-particle Dirac identities for arbitrary elementary spins. International Journal of Quantum Chemistry, 2000, 78, 407-411.	2.0	1

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37	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
38	Products of arbitrary class-sums in the symmetric group. International Journal of Quantum Chemistry, 1998, 70, 429-440.	2.0	0
39	Products of class sums of the symmetric group: Rules of partial elimination. International Journal of Quantum Chemistry, 1997, 63, 961-979.	2.0	1
40	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
41	Explicit expressions for the central characters of the symmetric group. Discrete Applied Mathematics, 1996, 67, 149-156.	0.9	10
42	The q-Zassenhaus formula. Letters in Mathematical Physics, 1996, 37, 11-13.	1.1	6
43	Hyperspherical functions with arbitrary permutational symmetry. Physical Review A, 1994, 49, 833-846.	2.5	36
44	Nonideal lasers, nonclassical light, and deformed photon states. Physical Review A, 1994, 49, 5149-5151.	2.5	67
45	A noâ€go theorem for a Lieâ€consistent qâ€Campbellâ€“Bakerâ€“Hausdorff expansion. Journal of Mathematical Physics, 1994, 35, 6172-6178.	1.1	4
46	Time Dependence of Exotic Coherent States. , 1994, , 245-252.		0
47	Products of class-sums of the symmetric group: Generalizing the recurrence relations. International Journal of Quantum Chemistry, 1993, 47, 243-260.	2.0	7
48	Eigenvalues of single-cycle class-sums in the symmetric group. II. International Journal of Quantum Chemistry, 1993, 48, 125-134.	2.0	5
49	Eigenvalues of single-cycle class-sums in the symmetric group. International Journal of Quantum Chemistry, 1992, 41, 147-151.	2.0	4
50	Products of Class-Sums of the Symmetric Group: Elimination of Two-Index Cycles. Israel Journal of Chemistry, 1991, 31, 287-295.	2.3	3
51	A partial recurrence relation for reduced class coefficients of the symmetric group. International Journal of Quantum Chemistry, 1991, 39, 593-604.	2.0	12
52	Nonspurious harmonic oscillator states in single particle coordinates. Journal of Mathematical Physics, 1990, 31, 1164-1166.	1.1	1
53	Non-spurious harmonic oscillator states with arbitrary symmetry. Annals of Physics, 1989, 196, 135-149.	2.8	18
54	Products of class operators of the symmetric group. International Journal of Quantum Chemistry, 1989, 35, 461-470.	2.0	13

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55	Coefficients of fractional parentage in the Lâ€“S coupling scheme. Journal of Mathematical Physics, 1988, 29, 1368-1388.	1.1	36
56	Squeezed and coherent states of fractional photons. Physical Review D, 1987, 35, 1248-1254.	4.7	40
57	Optical bistability in molecular systems exhibiting nonlinear absorption. Physical Review A, 1987, 35, 2175-2183.	2.5	14
58	Nonlinear complex eikonal approximation: Optical bistability in absorbing media. Physical Review A, 1987, 35, 1192-1209.	2.5	5
59	Generalized Holstein-Primakoff squeezed states for SU(n). Physical Review D, 1987, 35, 2601-2602.	4.7	17
60	The Kortewegâ€“de Vries hierarchy of isospectral transformations: Towards a general explicit expression. Journal of Mathematical Physics, 1987, 28, 1344-1350.	1.1	5
61	Classical limit of the Korteweg-de Vries hierarchy of isospectral transformations. Physical Review D, 1985, 32, 884-890.	4.7	5
62	An eikonal approximation for non linear resonators exhibiting bistability. Optics Communications, 1984, 48, 367-373.	2.1	13
63	Spurious complex energies for confining potentials in the complex-coordinate method. Chemical Physics Letters, 1984, 105, 194-196.	2.6	12
64	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
65	Intramolecular electronic energy transfer via exchange interaction in bichromophoric molecules. Chemical Physics Letters, 1983, 102, 88-94.	2.6	29
66	Possible broken supersymmetry behind the periodic table. Chemical Physics Letters, 1982, 87, 315-319.	2.6	14
67	A comparison between hydrogenic and Thomasâ€“Fermi expectation values. Journal of Chemical Physics, 1981, 74, 1221-1224.	3.0	16
68	Concerning the chemical potential of fewâ€electron systems. Journal of Chemical Physics, 1981, 74, 2397-2401.	3.0	44
69	Hydrogen molecular ion in a high magnetic field. Physical Review A, 1980, 21, 413-417.	2.5	38
70	Generalized Hiller-Sucher-Feinberg identity. Physical Review A, 1980, 21, 1067-1068.	2.5	14
71	The cyclic isomer of CO2. Journal of Chemical Physics, 1980, 73, 4517-4520.	3.0	13
72	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

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73	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
74	Theoretical Interpretation of Hund's Rule. Advances in Quantum Chemistry, 1977, 10, 143-185.	0.8	91
75	A Hohenberg-Kohn theorem for non-local potentials. Physics Letters, Section A: General, Atomic and Solid State Physics, 1977, 61, 19-21.	2.1	9
76	Fermi and Coulomb correlations in the 21 S state of the helium isoelectronic sequence. Theoretica Chimica Acta, 1977, 45, 61-67.	0.8	17
77	Bonding criteria for diatomic molecular orbitals and inter-relations among them. Theoretica Chimica Acta, 1977, 46, 173-181.	0.8	17
78	The Gaussian potential: Bound states in the continuum?. Theoretica Chimica Acta, 1976, 41, 321-328.	0.8	6
79	Orbital correspondence analysis in maximum symmetry: Formulation and conceptual framework. Theoretica Chimica Acta, 1975, 40, 1-15.	0.8	30