

# Karol Jankowski

## List of Publications by Year in descending order

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103  
papers

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citations

186265

28  
h-index

197818

49  
g-index

104  
all docs

104  
docs citations

104  
times ranked

624  
citing authors

#	ARTICLE	IF	CITATIONS
1	Applicability of coupled-pair theories to quasidegenerate electronic states: A model study. International Journal of Quantum Chemistry, 1980, 18, 1243-1269.	2.0	310
2	A coupled-cluster method for quasidegenerate states. International Journal of Quantum Chemistry, 1988, 34, 535-557.	2.0	163
3	Davidson-type corrections for quasidegenerate states. International Journal of Quantum Chemistry, 1985, 28, 931-942.	2.0	128
4	The impact of higher polarization basis functions on molecular ab initio results. I. The ground state of F <sub>2</sub> . Journal of Chemical Physics, 1985, 82, 1413-1419.	3.0	117
5	Application of symmetry-adapted pair functions in atomic structure calculations: A variational-perturbation treatment of the Ne atom. Physical Review A, 1980, 21, 45-65.	2.5	89
6	The impact of higher polarization basis functions on molecular AB initio results II. The ground states of CO, N <sub>2</sub> , O <sub>2</sub> , and F <sub>2</sub> . Chemical Physics, 1985, 98, 381-386.	1.9	74
7	Applicability of valence-universal multireference coupled-cluster theories to quasidegenerate electronic states. I. Models involving at most two-body amplitudes. Journal of Chemical Physics, 1992, 97, 7600-7612.	3.0	72
8	Towards Complete Solutions to Systems of Nonlinear Equations of Many-Electron Theories. Physical Review Letters, 1998, 81, 1195-1198.	7.8	72
9	Applicability of non-degenerate many-body perturbation theory to quasidegenerate electronic states: A model study. International Journal of Quantum Chemistry, 1983, 23, 1781-1802.	2.0	65
10	Cluster relations for multireference coupled-cluster theories: A model study. Journal of Chemical Physics, 1991, 95, 3549-3561.	3.0	62
11	Symmetry-adapted coupled-pair approach to the many-electron correlation problem. II. Application to the Be atom. Physical Review A, 1981, 24, 2316-2329.	2.5	61
12	Method of moments approach and coupled cluster theory. Theoretica Chimica Acta, 1991, 80, 223-243.	0.8	60
13	Symmetry-adapted coupled-pair approach to the many-electron correlation problem. III. Approximate coupled-pair approaches for the Be atom. Physical Review A, 1981, 24, 2330-2338.	2.5	56
14	Benchmark energy calculations on Be-like atoms. Physical Review A, 2002, 65, .	2.5	54
15	Applicability of nondegenerate many-body perturbation theory to quasi-degenerate electronic states. II. A two-state model. International Journal of Quantum Chemistry, 1985, 28, 525-534.	2.0	50
16	Second-order correlation energies for $\text{F}1\hat{a}^{\sim}$ , $\text{Na}1+$ , $\text{Mg}2+$ , and $\text{Ar}8+$ : Zdependence of irreducible-pair energies. Physical Review A, 1980, 22, 51-60.	2.5	48
17	Applicability of valence-universal multireference coupled-cluster theories to quasidegenerate electronic states. II. Models involving three-body amplitudes. Journal of Chemical Physics, 1994, 101, 3085-3095.	3.0	48
18	Electron-correlation third-order contributions to the electric dipole transition amplitudes of rare earth ions in crystals. Molecular Physics, 1986, 59, 1165-1175.	1.7	44

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19	Quasi-degeneracy and coupled-pair theories. <i>Chemical Physics Letters</i> , 1979, 67, 144-148.	2.6	39
20	Second-order electron correlation energies for Zn <sup>2+</sup> and Zn. <i>Journal of Chemical Physics</i> , 1982, 76, 448-457.	3.0	39
21	On the calculation of $K_{\text{I}}^2/K_{\text{I}}^{\pm}$ X-ray intensity ratios. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, 2369-2376.	1.5	39
22	Application of symmetry-adapted pair functions in atomic structure calculations. II. Third-order correlation energy of the neon atom. <i>Physical Review A</i> , 1982, 26, 2378-2394.	2.5	38
23	Second-order correlation energies of Mg and Ar. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1979, 12, 3157-3170.	1.6	35
24	Pair correlation energies for the 3d shell. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1979, 12, 345-353.	1.6	30
25	Full solution to the coupled-cluster equations: the H4 model. <i>Chemical Physics Letters</i> , 1998, 290, 180-188.	2.6	30
26	Effect of electron correlation on the forced electric dipole transition probabilities in systems. <i>Molecular Physics</i> , 1979, 38, 1445-1457.	1.7	29
27	A valence-universal coupled-cluster single- and double-excitations method for atoms. II. Application to Be. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994, 27, 829-842.	1.5	29
28	A valence-universal coupled-cluster single- and double-excitations method for atoms. III. Solvability problems in the presence of intruder states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994, 27, 1287-1298.	1.5	29
29	Second-order correlation energy of the neon atom. <i>Chemical Physics Letters</i> , 1978, 54, 68-72.	2.6	28
30	Physical and mathematical content of coupled-cluster equations. IV. Impact of approximations to the cluster operator on the structure of solutions. <i>Journal of Chemical Physics</i> , 1999, 111, 2952-2959.	3.0	27
31	Correlation and relativistic effects for many-electron systems. <i>Physica Scripta</i> , 1987, 36, 464-467.	2.5	25
32	Accurate third-order correlation energies for closed-shell systems. I. Ten-electron systems. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1982, 15, 1137-1159.	1.6	24
33	Physical and mathematical content of coupled-cluster equations: Correspondence between coupled-cluster and configuration-interaction solutions. <i>Journal of Chemical Physics</i> , 1999, 110, 3714-3729.	3.0	24
34	Accurate second order correlation energies of He and Be. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1979, 12, 2965-2969.	1.6	23
35	Physical and mathematical content of coupled-cluster equations. II. On the origin of irregular solutions and their elimination via symmetry adaptation. <i>Journal of Chemical Physics</i> , 1999, 110, 9345-9352.	3.0	22
36	Coverage of dynamic correlation effects by density functional theory functionals: Density-based analysis for neon. <i>Journal of Chemical Physics</i> , 2009, 130, 164102.	3.0	21

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37	Approximate coupled cluster methods based on a split-amplitude strategy. <i>Chemical Physics Letters</i> , 1996, 256, 141-148.	2.6	20
38	Physical and mathematical content of coupled-cluster equations. III. Model studies of dissociation processes for various reference states. <i>Journal of Chemical Physics</i> , 1999, 111, 2940-2951.	3.0	20
39	Towards benchmark second-order correlation energies for large atoms. II. Angular extrapolation problems. <i>Journal of Chemical Physics</i> , 2006, 124, 104107.	3.0	19
40	A characterization of pairs of subspaces for quantum chemical applications of the Galerkin-Petrov method. <i>International Journal of Quantum Chemistry</i> , 1976, 10, 683-697.	2.0	18
41	Electron correlation effects on transition probabilities of $\text{LaCl}_3: \text{Pr}^{3+}$ . <i>Molecular Physics</i> , 1979, 38, 1459-1465.	1.7	18
42	Transferability of the partial-wave increments to the second-order pair correlation energies for atoms. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1980, 13, 3909-3919.	1.6	18
43	A valence-universal coupled-cluster single- and double-excitation method for atoms. I. Theory and application to the $\text{C}^{2+}$ ion. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993, 26, 3035-3055.	1.5	18
44	Approximate coupled-cluster methods employing split cluster amplitudes: Implementation of an almost-linear coupled-cluster formalism. <i>Journal of Chemical Physics</i> , 1998, 109, 6255-6263.	3.0	18
45	Approximate Coupled Cluster Methods: Combined Reduced Multireference and Almost-Linear Coupled Cluster Methods with Singles and Doubles 11 This paper is dedicated to Professor Giuseppe Del Re at the occasion of his 65th anniversary.. <i>Advances in Quantum Chemistry</i> , 2000, 36, 231-251.	0.8	18
46	Multiple solutions of the single-reference coupled-cluster equations. II. Alternative reference states. <i>International Journal of Quantum Chemistry</i> , 1995, 53, 501-514.	2.0	17
47	Accurate third-order correlation energies for closed-shell systems. II. Two- and four-electron systems. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1982, 15, 4063-4077.	1.6	16
48	Second-order electron correlation energies for some $3d^{10}$ and $3d^{10}4s^2$ ions. <i>Journal of Chemical Physics</i> , 1985, 82, 841-847.	3.0	16
49	Electron-correlation contributions to the amplitudes of two-phonon absorption in $\infty$ systems. <i>Molecular Physics</i> , 1987, 60, 1211-1219.	1.7	16
50	Application of the complete-model-space MR-CCSD theory to the $2s^2 1S$ and $2p^2 1S$ states of Be. <i>Chemical Physics Letters</i> , 1993, 205, 471-478.	2.6	16
51	Multiple solutions of the valence-universal coupled-cluster equations for Be, $\text{B}^+$ , and $\text{C}^{2+}$ . <i>International Journal of Quantum Chemistry</i> , 1993, 48, 59-72.	2.0	16
52	Second-order picture of correlation effects in closed-shell atoms. <i>Molecular Physics</i> , 2000, 98, 1125-1139.	1.7	16
53	An approximate method for the evaluation of electron correlation effects on atomic energy differences. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1984, 17, 2393-2411.	1.6	15
54	Accurate MR CI studies of the $\text{N}_2$ ground state. <i>Chemical Physics</i> , 1987, 111, 265-269.	1.9	15

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55	Impact of the choice of model spaces and basis sets on the performance of the valence-universal coupled-cluster method: Energies for Be and C <sub>2</sub> <sup>+</sup> . <i>Physical Review A</i> , 1995, 51, 4583-4596.	2.5	15
56	Ab initio dynamic correlation effects in density functional theories: a density based study for argon. <i>Theoretical Chemistry Accounts</i> , 2010, 125, 433-444.	1.4	15
57	Applicability of the Galerkin-Petrov method in quantum chemistry. The quartic oscillator problem. <i>Chemical Physics Letters</i> , 1973, 19, 418-421.	2.6	14
58	An alternative to the quasirelativistic approach. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1988, 21, L147-L150.	1.5	13
59	Ab initio studies of electron correlation in rare-earth ions. I. Intrashell correlation for 4f <sup>2</sup> in Pr <sup>3+</sup> . <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1981, 14, 3345-3353.	1.6	11
60	Differential correlation effects for states of the 3d <sup>n</sup> and 3d <sup>n-1</sup> 4s <sup>m</sup> configurations. I. The copper and zinc atoms and their ions. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1985, 18, 2133-2146.	1.6	11
61	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. III. State-universal coupled-cluster method. <i>International Journal of Quantum Chemistry</i> , 1998, 67, 239-250.	2.0	11
62	Effect of electron correlation on the forced electric dipole transition probabilities in N systems. <i>Molecular Physics</i> , 1981, 43, 371-382.	1.7	10
63	Accuracy of first-order wavefunctions for ten-electron atomic systems. <i>Chemical Physics Letters</i> , 1984, 105, 370-373.	2.6	10
64	Electron correlation effects in the 4f <sup>14</sup> shell. <i>International Journal of Quantum Chemistry</i> , 1985, 27, 665-675.	2.0	10
65	Correlation and relativistic effects for many-electron systems. II. Second-order energies for closed-shell atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, 2669-2678.	1.5	10
66	Ab initio studies of electron correlation in rare-earth ions. II. Non-transferable intershell correlation effects for 4f <sup>2</sup> in Pr <sup>3+</sup> . <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990, 23, 1951-1960.	1.5	10
67	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. I. Single-reference-state formulation. <i>International Journal of Quantum Chemistry</i> , 1998, 67, 205-219.	2.0	10
68	Application of MP2 Results in Comparative Studies of Semiempirical Ground-State Energies of Large Atoms. <i>Collection of Czechoslovak Chemical Communications</i> , 2003, 68, 240-252.	1.0	10
69	Electron pair correlation energies for Zn <sup>2+</sup> . <i>International Journal of Quantum Chemistry</i> , 1979, 16, 65-70.	2.0	9
70	Differential correlation effects for states of the 3d <sup>n</sup> and 3d <sup>n-1</sup> 4s <sup>m</sup> configurations. II. A complete study of the energy splittings for the nickel atom. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1985, 18, 4383-4391.	1.6	9
71	Intershell 4f electron correlation effects. <i>International Journal of Quantum Chemistry</i> , 1988, 34, 279-288.	2.0	9
72	Towards benchmark second-order correlation energies for large atoms: Zn <sup>2+</sup> revisited. <i>Journal of Chemical Physics</i> , 2004, 121, 12334.	3.0	9

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73	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. II. Valence-universal coupled-cluster method. <i>International Journal of Quantum Chemistry</i> , 1998, 67, 221-237.	2.0	8
74	Coupled cluster energy dependence on reference-state choice: impact of cluster operator structure. <i>Chemical Physics Letters</i> , 2001, 343, 365-374.	2.6	7
75	Application of accurate MP2 energies for closed-shell atoms in examinations of density functionals for 3d 10 electron ions. <i>International Journal of Quantum Chemistry</i> , 2004, 99, 277-287.	2.0	7
76	Size-extensivity in multireference many-body perturbation theories: A direct comparison between single-reference and multireference perturbation theories in the nondegenerate case. <i>International Journal of Quantum Chemistry</i> , 1989, 36, 705-726.	2.0	6
77	On the Presumptive Similarity of Kohn-Sham and Brueckner Orbitals. <i>Structural Chemistry</i> , 2004, 15, 437-445.	2.0	6
78	A comparative study of Kohn-Sham, Brueckner and Hartree-Fock orbitals. <i>Chemical Physics Letters</i> , 2004, 389, 393-399.	2.6	6
79	Ab initio asymptotic-expansion coefficients for pair energies in MP2 perturbation theory for atoms. <i>Molecular Physics</i> , 2006, 104, 2213-2223.	1.7	6
80	Ab initio studies of electron correlation effects in heavier closed-shell atoms: Structure of the all-electron correlation energies of Zn	2.5	6
81	Ab initio studies of electron correlation in rare-earth ions I. Intrashell correlation for 4f <sup>2</sup> in Pr <sup>3+</sup> . <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1983, 16, 1667-1668.	1.6	5
82	Application of the valence-universal coupled-cluster method based on various model spaces. II. Nonstandard solutions for Be. <i>International Journal of Quantum Chemistry</i> , 1996, 59, 239-249.	2.0	5
83	Generalization of the concept of Brueckner orbitals for multi-reference-state methods. <i>Chemical Physics Letters</i> , 1997, 277, 275-283.	2.6	5
84	Multiple solutions of coupled-cluster doubles equations for the Pariser-Parr-Pople model of benzene. <i>Theoretical Chemistry Accounts</i> , 2003, 109, 309-315.	1.4	5
85	Ab initio Correlation Effects in Density Functional Theories: An Electron-Distribution-Based Study for Neon. <i>Collection of Czechoslovak Chemical Communications</i> , 2005, 70, 1157-1176.	1.0	5
86	Generalized maximum-overlap orbitals for multi-reference-state theories. <i>Molecular Physics</i> , 1998, 94, 29-39.	1.7	5
87	An investigation of the reliability of the Galerkin-Petrov method with a special study of the helium atom ground state. <i>Theoretica Chimica Acta</i> , 1976, 43, 145-159.	0.8	4
88	An investigation of the reliability of the Galerkin-Petrov method. <i>Theoretica Chimica Acta</i> , 1978, 48, 119-125.	0.8	4
89	On definitions of L convergence of atomic correlation energies. <i>Journal of Chemical Physics</i> , 1985, 82, 1969-1972.	3.0	4
90	Application of the valence-universal coupled-cluster method based on various model spaces to 1S states of Be. <i>International Journal of Quantum Chemistry</i> , 1995, 55, 269-275.	2.0	4

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91	Correspondence between physical states and solutions to the coupled-cluster equations. , 1999, 75, 483-496.		4
92	Brueckner-type reference determinants in applications of coupled cluster methods to excited states. Molecular Physics, 2002, 100, 1741-1754.	1.7	4
93	A perturbation treatment for two-electron atomic systems with correlation in zero order. Theoretica Chimica Acta, 1969, 13, 165-170.	0.8	3
94	An investigation of the reliability of the Galerkin-Petrov method. Theoretica Chimica Acta, 1978, 47, 275-282.	0.8	3
95	Structure of the correlation energy in 3d10 systems. Journal of Chemical Physics, 1988, 88, 7617-7622.	3.0	3
96	Performance of valence-universal multireference coupled-cluster theory for quasi-degenerate states: TheH8 andDZPH4 models. International Journal of Quantum Chemistry, 1995, 55, 205-212.	2.0	3
97	High accuracy <i>ab initio</i> studies of electron-densities for the ground state of Be-like atomic systems. Journal of Chemical Physics, 2013, 138, 164306.	3.0	3
98	Brueckner orbitals for multi-reference state theories. Journal of Physics A, 1999, 32, 2447-2459.	1.6	2
99	Dependence of state-universal coupled-cluster energies on the model-space-defining orbitals for states of varying quasidegeneracy. Computational and Theoretical Chemistry, 2001, 547, 55-68.	1.5	2
100	On the (N, Z) dependence of the second-order MÅller-Plesset correlation energies for closed-shell atomic systems. Journal of Chemical Physics, 2016, 145, 104308.	3.0	2
101	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. IV. Single-reference-state methods in applications to excited states. International Journal of Quantum Chemistry, 2002, 90, 250-261.	2.0	1
102	Chapter 9 Asymptotic Behavior of MP2 Correlation Energies for Closed-Shell Atoms. Advances in Quantum Chemistry, 2008, , 151-175.	0.8	1
103	A perturbative approach to the almost-linear coupled-cluster formalism. Chemical Physics Letters, 1999, 311, 265-274.	2.6	0