Karol Jankowski

List of Publications by Year in descending order

103 papers	2,750 citations	185998 28 h-index	197535 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.	1.0	310
2	A coupled-cluster method for quasidegenerate states. International Journal of Quantum Chemistry, 1988, 34, 535-557.	1.0	163
3	Davidsonâ€type corrections for quasidegenerate states. International Journal of Quantum Chemistry, 1985, 28, 931-942.	1.0	128
4	The impact of higher polarization basis functions on molecular ab initio results. I. The ground state of F2. Journal of Chemical Physics, 1985, 82, 1413-1419.	1.2	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.	1.0	89
6	The impact of higher polarization basis functions on molecular AB initio results II. The ground states of CO, N2, O2, and F2. Chemical Physics, 1985, 98, 381-386.	0.9	74
7	Applicability of valenceâ€universal multireference coupledâ€cluster theories to quasidegenerate electronic states. I. Models involving at most twoâ€body amplitudes. Journal of Chemical Physics, 1992, 97, 7600-7612.	1.2	72
8	Towards Complete Solutions to Systems of Nonlinear Equations of Many-Electron Theories. Physical Review Letters, 1998, 81, 1195-1198.	2.9	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.	1.0	65
10	Cluster relations for multireference coupledâ€cluster theories: A model study. Journal of Chemical Physics, 1991, 95, 3549-3561.	1.2	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.	1.0	61
12	Method of moments approach and coupled cluster theory. Theoretica Chimica Acta, 1991, 80, 223-243.	0.9	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.	1.0	56
14	Benchmark energy calculations on Be-like atoms. Physical Review A, 2002, 65, .	1.0	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.	1.0	50
16	Second-order correlation energies forF1â^',Na1+,Mg2+, andAr8+:Zdependence of irreducible-pair energies. Physical Review A, 1980, 22, 51-60.	1.0	48
17	Applicability of valenceâ€universal multireference coupledâ€cluster theories to quasidegenerate electronic states. II. Models involving threeâ€body amplitudes. Journal of Chemical Physics, 1994, 101, 3085-3095.	1.2	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.	0.8	44

#	Article	IF	Citations
19	Quasi-degeneracy and coupled-pair theories. Chemical Physics Letters, 1979, 67, 144-148.	1.2	39
20	Secondâ€order electron correlation energies for Zn2+and Zn. Journal of Chemical Physics, 1982, 76, 448-457.	1.2	39
21	On the calculation of KÎ²/KÎ± X-ray intensity ratios. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 2369-2376.	0.6	39
22	Application of symmetry-adapted pair functions in atomic structure calculations. II. Third-order correlation energy of the neon atom. Physical Review A, 1982, 26, 2378-2394.	1.0	38
23	Second-order correlation energies of Mg and Ar. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 3157-3170.	1.6	35
24	Pair correlation energies for the 3d shell. Journal of Physics B: Atomic and Molecular Physics, 1979, 12, 345-353.	1.6	30
25	Full solution to the coupled-cluster equations: the H4 model. Chemical Physics Letters, 1998, 290, 180-188.	1.2	30
26	Effect of electron correlation on the forced electric dipole transition probabilities infnsystems. Molecular Physics, 1979, 38, 1445-1457.	0.8	29
27	A valence-universal coupled-duster single- and double-excitations method for atoms. II. Application to Be. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, 829-842.	0.6	29
28	A valence-universal coupled-cluster single- and double-excitations method for atoms. III. Solvability problems in the presence of intruder states. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, 1287-1298.	0.6	29
29	Second-order correlation energy of the neon atom. Chemical Physics Letters, 1978, 54, 68-72.	1.2	28
30	Physical and mathematical content of coupled-cluster equations. IV. Impact of approximations to the cluster operator on the structure of solutions. Journal of Chemical Physics, 1999, 111, 2952-2959.	1.2	27
31	Correlation and relativistic effects for many-electron systems. Physica Scripta, 1987, 36, 464-467.	1.2	25
32	Accurate third-order correlation energies for closed-shell systems. I. Ten-electron systems. Journal of Physics B: Atomic and Molecular Physics, 1982, 15, 1137-1159.	1.6	24
33	Physical and mathematical content of coupledâ€“cluster equations: Correspondence between coupledâ€“cluster and configurationâ€“interaction solutions. Journal of Chemical Physics, 1999, 110, 3714-3729.	1.2	24
34	Accurate second order correlation energies of He and Be. Journal of Physics B: Atomic and Molecular Physics, 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. Journal of Chemical Physics, 1999, 110, 9345-9352.	1.2	22
36	Coverage of dynamic correlation effects by density functional theory functionals: Density-based analysis for neon. Journal of Chemical Physics, 2009, 130, 164102.	1.2	21

#	Article	IF	Citations
37	Approximate coupled cluster methods based on a split-amplitude strategy. Chemical Physics Letters, 1996, 256, 141-148.	1.2	20
38	Physical and mathematical content of coupled-cluster equations. III. Model studies of dissociation processes for various reference states. Journal of Chemical Physics, 1999, 111, 2940-2951.	1.2	20
39	Towards benchmark second-order correlation energies for large atoms. II. Angular extrapolation problems. Journal of Chemical Physics, 2006, 124, 104107.	1.2	19
40	A characterization of pairs of subspaces for quantum chemical applications of the Galerkin-Petrov method. International Journal of Quantum Chemistry, 1976, 10, 683-697.	1.0	18
41	Electron correlation effects on transition probabilities of LaCl3: Pr3+. Molecular Physics, 1979, 38, 1459-1465.	0.8	18
42	Transferability of the partial-wave increments to the second-order pair correlation energies for atoms. Journal of Physics B: Atomic and Molecular Physics, 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 C2+ion. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 3035-3055.	0.6	18
44	Approximate coupled-cluster methods employing split cluster amplitudes: Implementation of an almost-linear coupled-cluster formalism. Journal of Chemical Physics, 1998, 109, 6255-6263.	1.2	18
45	Approximate Coupled Cluster Methods: Combined Reduced Multireference and Almostâ€“Linear Coupled Cluster Methods with Singles and Doubles 11This paper is dedicated to Professor Giuseppe Del Re at the occasion of his 65th anniversary.. Advances in Quantum Chemistry, 2000, 36, 231-251.	0.4	18
46	Multiple solutions of the single-reference coupled-cluster equations. II. Alternative reference states. International Journal of Quantum Chemistry, 1995, 53, 501-514.	1.0	17
47	Accurate third-order correlation energies for closed-shell systems. II. Two- and four-electron systems. Journal of Physics B: Atomic and Molecular Physics, 1982, 15, 4063-4077.	1.6	16
48	Secondâ€order electron correlation energies for some 3d10 and 3d104s2 ions. Journal of Chemical Physics, 1985, 82, 841-847.	1.2	16
49	Electron-correlation contributions to the amplitudes of two-phonon absorption infNsystems. Molecular Physics, 1987, 60, 1211-1219.	0.8	16
50	Application of the complete-model-space MR-CCSD theory to the 2s21S and 2p21S states of Be. Chemical Physics Letters, 1993, 205, 471-478.	1.2	16
51	Multiple solutions of the valence-universal coupled-cluster equations for Be, B+, and C2+. International Journal of Quantum Chemistry, 1993, 48, 59-72.	1.0	16
52	Second-order picture of correlation effects in closed-shell atoms. Molecular Physics, 2000, 98, 1125-1139.	0.8	16
53	An approximate method for the evaluation of electron correlation effects on atomic energy differences. Journal of Physics B: Atomic and Molecular Physics, 1984, 17, 2393-2411.	1.6	15
54	Accurate MR CI studies of the N2 ground state. Chemical Physics, 1987, 111, 265-269.	0.9	15

#	Article	IF	Citations
55	Impact of the choice of model spaces and basis sets on the performance of the valence-universal coupled-cluster method: Energies for Be andC2+. Physical Review A, 1995, 51, 4583-4596.	1.0	15
56	Ab initio dynamic correlation effects in density functional theories: a density based study for argon. Theoretical Chemistry Accounts, 2010, 125, 433-444.	0.5	15
57	Applicability of the Galerkinâ€"Petrov method in quantum chemistry. The quartic oscillator problem. Chemical Physics Letters, 1973, 19, 418-421.	1.2	14
58	An alternative to the quasirelativistic approach. Journal of Physics B: Atomic, Molecular and Optical Physics, 1988, 21, L147-L150.	0.6	13
59	Ab initio studies of electron correlation in rare-earth ions. I. Intrashell correlation for 4f2in Pr3+. Journal of Physics B: Atomic and Molecular Physics, 1981, 14, 3345-3353.	1.6	11
60	Differential correlation effects for states of the 3dnand 3dn4smconfigurations. I. The copper and zinc atoms and their ions. Journal of Physics B: Atomic and Molecular Physics, 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. International Journal of Quantum Chemistry, 1998, 67, 239-250.	1.0	11
62	Effect of electron correlation on the forced electric dipole transition probabilities infNsystems. Molecular Physics, 1981, 43, 371-382.	0.8	10
63	Accuracy of first-order wavefunctions for ten-electron atomic systems. Chemical Physics Letters, 1984, 105, 370-373.	1.2	10
64	Electron correlation effects in the 4f14shell. International Journal of Quantum Chemistry, 1985, 27, 665-675.	1.0	10
65	Correlation and relativistic effects for many-electron systems. II. Second-order energies for closed-shell atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 2669-2678.	0.6	10
66	Ab initio studies of electron correlation in rare-earth ions. II. Non-transferable intershell correlation effects for 4f2in Pr3+. Journal of Physics B: Atomic, Molecular and Optical Physics, 1990, 23, 1951-1960.	0.6	10
67	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. I. Single-reference-state formulation. International Journal of Quantum Chemistry, 1998, 67, 205-219.	1.0	10
68	Application of MP2 Results in Comparative Studies of Semiempirical Ground-State Energies of Large Atoms. Collection of Czechoslovak Chemical Communications, 2003, 68, 240-252.	1.0	10
69	Electron pair correlation energies for ZN2+. International Journal of Quantum Chemistry, 1979, 16, 65-70.	1.0	9
70	Differential correlation effects for states of the 3dnand 3dn4smconfigurations. II. A complete study of the energy splittings for the nickel atom. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, 4383-4391.	1.6	9
71	Intershellnl4f electron correlation effects. International Journal of Quantum Chemistry, 1988, 34, 279-288.	1.0	9
72	Towards benchmark second-order correlation energies for large atoms: Zn[sup 2+] revisited. Journal of Chemical Physics, 2004, 121, 12334.	1.2	9

#	Article	IF	Citations
73	Model study of the impact of orbital choice on the accuracy of coupled-cluster energies. II. Valence-universal coupled-cluster method. International Journal of Quantum Chemistry, 1998, 67, 221-237.	1.0	8
74	Coupled cluster energy dependence on reference-state choice: impact of cluster operator structure. Chemical Physics Letters, 2001, 343, 365-374.	1.2	7
75	Application of accurate MP2 energies for closed-shell atoms in examinations of density functionals for 3d 10 electron ions. International Journal of Quantum Chemistry, 2004, 99, 277-287.	1.0	7
76	Size-extensivity in multireference many-body perturbation theories: A direct comparison between single-reference and multireference perturbation theories in the nondegenerate case. International Journal of Quantum Chemistry, 1989, 36, 705-726.	1.0	6
77	On the Presumptive Similarity of Kohnâ€“Sham and Brueckner Orbitals. Structural Chemistry, 2004, 15, 437-445.	1.0	6
78	A comparative study of Kohnâ€“Sham, Brueckner and Hartreeâ€“Fock orbitals. Chemical Physics Letters, 2004, 389, 393-399.	1.2	6
79	Ab initioasymptotic-expansion coefficients for pair energies in MP2 perturbation theory for atoms. Molecular Physics, 2006, 104, 2213-2223.	0.8	6
80	Ab initiostudies of electron correlation effects in heavier closed-shell atoms: Structure of the all-electron correlation energies of Zn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:math>and Zn. Physical Review A, 2012, 86, .	1.0	6
81	Ab initio studies of electron correlation in rare-earth ions I. Intrashell correlation for 4f2 in Pr3+. Journal of Physics B: Atomic and Molecular Physics, 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. International Journal of Quantum Chemistry, 1996, 59, 239-249.	1.0	5
83	Generalization of the concept of Brueckner orbitals for multi-reference-state methods. Chemical Physics Letters, 1997, 277, 275-283.	1.2	5
84	Multiple solutions of coupled-cluster doubles equations for the Pariser?Parr?Pople model of benzene. Theoretical Chemistry Accounts, 2003, 109, 309-315.	0.5	5
85	Ab initio Correlation Effects in Density Functional Theories: An Electron-Distribution-Based Study for Neon. Collection of Czechoslovak Chemical Communications, 2005, 70, 1157-1176.	1.0	5
86	Generalized maximum-overlap orbitals for multi-reference-state theories. Molecular Physics, 1998, 94, 29-39.	0.8	5
87	An investigation of the reliability of the Galerkin-Petrov method with a special study of the helium atom ground state. Theoretica Chimica Acta, 1976, 43, 145-159.	0.9	4
88	An investigation of the reliability of the Galerkin-Petrov method. Theoretica Chimica Acta, 1978, 48, 119-125.	0.9	4
89	On definitions of L convergence of atomic correlation energies. Journal of Chemical Physics, 1985, 82, 1969-1972.	1.2	4
90	Application of the valence-universal coupled-cluster method based on various model spaces to1S states of Be. International Journal of Quantum Chemistry, 1995, 55, 269-275.	1.0	4

#	Article	IF	Citations
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.	0.8	4
93	A perturbation treatment for two-electron atomic systems with correlation in zero order. Theoretica Chimica Acta, 1969, 13, 165-170.	0.9	3
94	An investigation of the reliability of the Galerkin-Petrov method. Theoretica Chimica Acta, 1978, 47, 275-282.	0.9	3
95	Structure of the correlation energy in 3d10 systems. Journal of Chemical Physics, 1988, 88, 7617-7622.	1.2	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.	1.0	3
97	High accuracy ab initio studies of electron-densities for the ground state of Be-like atomic systems. Journal of Chemical Physics, 2013, 138, 164306.	1.2	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 MÃ¸ller-Plesset correlation energies for closed-shell atomic systems. Journal of Chemical Physics, 2016, 145, 104308.	1.2	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.	1.0	1
102	Chapter 9 Asymptotic Behavior of MP2 Correlation Energies for Closed-Shell Atoms. Advances in Quantum Chemistry, 2008, , 151-175.	0.4	1
103	A perturbative approach to the almost-linear coupled-cluster formalism. Chemical Physics Letters, 1999, 311, 265-274.	1.2	0