

Piotr Piecuch

List of Publications by Citations

Source: <https://exaly.com/author-pdf/5844889/piotr-piecuch-publications-by-citations.pdf>
Version: 2024-04-11

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

225 papers	11,913 citations	59 h-index	100 g-index
241 ext. papers	12,601 ext. citations	3.2 avg, IF	6.47 L-index

#	Paper	IF	Citations
225	Efficient computer implementation of the renormalized coupled-cluster methods: The R-CCSD[T], R-CCSD(T), CR-CCSD[T], and CR-CCSD(T) approaches. <i>Computer Physics Communications</i> , 2002 , 149, 71-96	4.2	420
224	Renormalized coupled-cluster methods exploiting left eigenstates of the similarity-transformed Hamiltonian. <i>Journal of Chemical Physics</i> , 2005 , 123, 224105	3.9	364
223	The method of moments of coupled-cluster equations and the renormalized CCSD[T], CCSD(T), CCSD(TQ), and CCSDT(Q) approaches. <i>Journal of Chemical Physics</i> , 2000 , 113, 18-35	3.9	361
222	A state-selective multireference coupled-cluster theory employing the single-reference formalism. <i>Journal of Chemical Physics</i> , 1993 , 99, 1875-1900	3.9	286
221	New coupled-cluster methods with singles, doubles, and noniterative triples for high accuracy calculations of excited electronic states. <i>Journal of Chemical Physics</i> , 2004 , 120, 1715-38	3.9	282
220	Recent developments in the general atomic and molecular electronic structure system. <i>Journal of Chemical Physics</i> , 2020 , 152, 154102	3.9	274
219	The active-space equation-of-motion coupled-cluster methods for excited electronic states: Full EOMCCSDt. <i>Journal of Chemical Physics</i> , 2001 , 115, 643-651	3.9	239
218	Recent advances in electronic structure theory: Method of moments of coupled-cluster equations and renormalized coupled-cluster approaches. <i>International Reviews in Physical Chemistry</i> , 2002 , 21, 527-655	3.9	235
217	Coupled-cluster methods with internal and semi-internal triply and quadruply excited clusters: CCSDt and CCSDtq approaches. <i>Journal of Chemical Physics</i> , 1999 , 110, 6103-6122	3.9	219
216	Application of Hilbert-space coupled-cluster theory to simple (H ₂) ₂ model systems: Planar models. <i>Physical Review A</i> , 1993 , 47, 2738-2782	2.6	201
215	Where does the planar-to-nonplanar turnover occur in small gold clusters?. <i>Journal of the American Chemical Society</i> , 2005 , 127, 1049-52	16.4	198
214	Renormalized CCSD(T) and CCSD(TQ) approaches: Dissociation of the N ₂ triple bond. <i>Journal of Chemical Physics</i> , 2000 , 113, 5644-5652	3.9	193
213	State-selective multireference coupled-cluster theory employing the single-reference formalism: Implementation and application to the H ₈ model system. <i>Journal of Chemical Physics</i> , 1994 , 100, 5792-5809	3.9	178
212	Local correlation calculations using standard and renormalized coupled-cluster approaches. <i>Journal of Chemical Physics</i> , 2009 , 131, 114109	3.9	177
211	Method of moments of coupled-cluster equations: a new formalism for designing accurate electronic structure methods for ground and excited states. <i>Theoretical Chemistry Accounts</i> , 2004 , 112, 349-393	1.9	174
210	Single-reference, size-extensive, non-iterative coupled-cluster approaches to bond breaking and biradicals. <i>Chemical Physics Letters</i> , 2006 , 418, 467-474	2.5	171
209	Extension of the renormalized coupled-cluster methods exploiting left eigenstates of the similarity-transformed hamiltonian to open-shell systems: a benchmark study. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 11359-82	2.8	160

208	Theoretical models on the Cu ₂ O ₂ torture track: mechanistic implications for oxytyrosinase and small-molecule analogues. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 1991-2004	2.8	157
207	Combined coupled-cluster and many-body perturbation theories. <i>Journal of Chemical Physics</i> , 2004 , 121, 12197-207	3.9	156
206	A comparison of the renormalized and active-space coupled-cluster methods: Potential energy curves of BH and F ₂ . <i>Chemical Physics Letters</i> , 2001 , 344, 165-175	2.5	133
205	The active-space equation-of-motion coupled-cluster methods for excited electronic states: The EOMCCSDt approach. <i>Journal of Chemical Physics</i> , 2000 , 113, 8490-8502	3.9	133
204	Coupled-cluster theory for three-body Hamiltonians. <i>Physical Review C</i> , 2007 , 76,	2.7	129
203	Orthogonally spin-adapted coupled-cluster equations involving singly and doubly excited clusters. Comparison of different procedures for spin-adaptation. <i>International Journal of Quantum Chemistry</i> , 1989 , 36, 429-453	2.1	115
202	Excited-state potential energy curves of CH ⁺ : a comparison of the EOMCCSDt and full EOMCCSDT results. <i>Chemical Physics Letters</i> , 2001 , 347, 237-246	2.5	111
201	Orthogonally spin-adapted multi-reference Hilbert space coupled-cluster formalism: diagrammatic formulation. <i>Theoretica Chimica Acta</i> , 1992 , 83, 69-103		111
200	Application of Hilbert-space coupled-cluster theory to simple (H ₂) ₂ model systems. II. Nonplanar models. <i>Physical Review A</i> , 1994 , 49, 3479-3514	2.6	110
199	Coupled cluster calculations of ground and excited states of nuclei. <i>Physical Review Letters</i> , 2004 , 92, 132501	7.4	109
198	Extension of renormalized coupled-cluster methods including triple excitations to excited electronic states of open-shell molecules. <i>Journal of Chemical Physics</i> , 2005 , 122, 214107	3.9	109
197	Approximate account of connected quadruply excited clusters in single-reference coupled-cluster theory via cluster analysis of the projected unrestricted Hartree-Fock wave function. <i>Physical Review A</i> , 1996 , 54, 1210-1241	2.6	108
196	Orthogonally spin-adapted state-universal coupled-cluster formalism: Implementation of the complete two-reference theory including cubic and quartic coupling terms. <i>Journal of Chemical Physics</i> , 1994 , 101, 5875-5890	3.9	107
195	Thermochemical kinetics for multireference systems: addition reactions of ozone. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 5786-99	2.8	106
194	New type of noniterative energy corrections for excited electronic states: Extension of the method of moments of coupled-cluster equations to the equation-of-motion coupled-cluster formalism. <i>Journal of Chemical Physics</i> , 2001 , 115, 2966-2978	3.9	102
193	Two new classes of non-iterative coupled-cluster methods derived from the method of moments of coupled-cluster equations. <i>Molecular Physics</i> , 2006 , 104, 2149-2172	1.7	101
192	Coupled cluster approaches with an approximate account of triexcitations and the optimized inner projection technique. <i>Theoretica Chimica Acta</i> , 1990 , 78, 65-128		101
191	EOMXCC: A New Coupled-Cluster Method for Electronic Excited States. <i>Advances in Quantum Chemistry</i> , 1999 , 34, 295-380	1.4	99

190	Left-eigenstate completely renormalized equation-of-motion coupled-cluster methods: Review of key concepts, extension to excited states of open-shell systems, and comparison with electron-attached and ionized approaches. <i>International Journal of Quantum Chemistry</i> , 2009 , 109, 3268-3304	2.1	97
189	Active-space equation-of-motion coupled-cluster methods for excited states of radicals and other open-shell systems: EA-EOMCCSDt and IP-EOMCCSDt. <i>Journal of Chemical Physics</i> , 2005 , 123, 134113	3.9	95
188	Can ordinary single-reference coupled-cluster methods describe the potential energy curve of N ₂ ? The renormalized CCSDT(Q) study. <i>Chemical Physics Letters</i> , 2001 , 344, 176-184	2.5	95
187	Extensive generalization of renormalized coupled-cluster methods. <i>Journal of Chemical Physics</i> , 2005 , 122, 074107	3.9	94
186	Improved computational strategy for the state-selective coupled-cluster theory with semi-internal triexcited clusters: Potential energy surface of the HF molecule. <i>Journal of Chemical Physics</i> , 1995 , 103, 9331-9346	3.9	93
185	Multilevel extension of the cluster-in-molecule local correlation methodology: merging coupled-cluster and Møller-Plesset perturbation theories. <i>Journal of Physical Chemistry A</i> , 2010 , 114, 6721-7	2.8	92
184	The X1Sigma ⁺ , B1Delta _g , and BP1Sigma ⁺ states of C ₂ : a comparison of renormalized coupled-cluster and multireference methods with full configuration interaction benchmarks. <i>Journal of Chemical Physics</i> , 2005 , 122, 124104	3.9	92
183	Ab-initio coupled-cluster study of 16O. <i>Physical Review Letters</i> , 2005 , 94, 212501	7.4	90
182	Efficient formulation and computer implementation of the active-space electron-attached and ionized equation-of-motion coupled-cluster methods. <i>Journal of Chemical Physics</i> , 2006 , 125, 234107	3.9	87
181	Coupled-cluster methods with internal and semi-internal triply excited clusters: Vibrational spectrum of the HF molecule. <i>Journal of Chemical Physics</i> , 1999 , 111, 6679-6692	3.9	84
180	Complete set of solutions of multireference coupled-cluster equations: The state-universal formalism. <i>Physical Review A</i> , 2000 , 61,	2.6	82
179	Extension of the method of moments of coupled-cluster equations to a multireference wave operator formalism. <i>Computational and Theoretical Chemistry</i> , 2001 , 547, 191-208		80
178	Improved design of orbital domains within the cluster-in-molecule local correlation framework: single-environment cluster-in-molecule ansatz and its application to local coupled-cluster approach with singles and doubles. <i>Journal of Physical Chemistry A</i> , 2010 , 114, 8644-57	2.8	79
177	The Cobalt-Methyl Bond Dissociation in Methylcobalamin: New Benchmark Analysis Based on Density Functional Theory and Completely Renormalized Coupled-Cluster Calculations. <i>Journal of Chemical Theory and Computation</i> , 2012 , 8, 1870-94	6.4	78
176	Extension of the method of moments of coupled-cluster equations to excited states: The triples and quadruples corrections to the equation-of-motion coupled-cluster singles and doubles energies. <i>Journal of Chemical Physics</i> , 2002 , 116, 7411-7423	3.9	78
175	Molecular quadrupole moment functions of HF and N ₂ . I. Ab initio linear-response coupled-cluster results. <i>Journal of Chemical Physics</i> , 1996 , 104, 4699-4715	3.9	74
174	Theoretical characterization of end-on and side-on peroxide coordination in ligated Cu ₂ O ₂ models. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 11557-68	2.8	72
173	Active-space coupled-cluster methods. <i>Molecular Physics</i> , 2010 , 108, 2987-3015	1.7	68

172	Breaking bonds with the state-selective multireference coupled-cluster method employing the single-reference formalism. <i>Journal of Chemical Physics</i> , 1995 , 102, 898-904	3.9	65
171	Doubly electron-attached and doubly ionized equation-of-motion coupled-cluster methods with 4-particle-2-hole and 4-hole-2-particle excitations and their active-space extensions. <i>Journal of Chemical Physics</i> , 2013 , 138, 194102	3.9	63
170	Biorthogonal moment expansions in coupled-cluster theory: Review of key concepts and merging the renormalized and active-space coupled-cluster methods. <i>Chemical Physics</i> , 2012 , 401, 180-202	2.3	61
169	Coupled-cluster calculations for valence systems around O16. <i>Physical Review C</i> , 2006 , 74,	2.7	61
168	In Search of the Relationship between Multiple Solutions Characterizing Coupled-Cluster Theories. <i>Computational Chemistry - Reviews of Current Trends</i> , 2000 , 1-104		60
167	Breaking bonds with the left eigenstate completely renormalized coupled-cluster method. <i>Journal of Chemical Physics</i> , 2007 , 127, 174106	3.9	59
166	Active-space coupled-cluster study of electronic states of Be3. <i>Journal of Chemical Physics</i> , 2005 , 123, 074319	3.9	58
165	Comparison of low-order multireference many-body perturbation theories. <i>Journal of Chemical Physics</i> , 2005 , 122, 134105	3.9	58
164	Converging High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions. <i>Physical Review Letters</i> , 2017 , 119, 223003	7.4	56
163	Embedding vs Supermolecular Strategies in Evaluating the Hydrogen-Bonding-Induced Shifts of Excitation Energies. <i>Journal of Chemical Theory and Computation</i> , 2011 , 7, 1647-1666	6.4	56
162	Stereoelectronic effects on molecular geometries and state-energy splittings of ligated monocopper dioxygen complexes. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 3754-67	2.8	56
161	State-selective multi-reference coupled-cluster theory using multi-configuration self-consistent-field orbitals. A model study on H8. <i>Chemical Physics Letters</i> , 1994 , 221, 121-128	2.5	55
160	Coupled-cluster approaches with an approximate account of triexcitations and the optimized-inner-projection technique. II. Coupled-cluster results for cyclic-polyene model systems. <i>Physical Review B</i> , 1990 , 42, 3351-3379	3.3	55
159	Balancing dynamic and nondynamic correlation for diradical and aromatic transition states: a renormalized coupled-cluster study of the cope rearrangement of 1,5-hexadiene. <i>Journal of the American Chemical Society</i> , 2005 , 127, 2608-14	16.4	54
158	New classes of non-iterative energy corrections to multi-reference coupled-cluster energies. <i>Molecular Physics</i> , 2004 , 102, 2425-2449	1.7	54
157	State-selective multireference coupled-cluster theory: In pursuit of property calculation. <i>Journal of Chemical Physics</i> , 1996 , 104, 6582-6589	3.9	54
156	Method of moments approach and coupled cluster theory. <i>Theoretica Chimica Acta</i> , 1991 , 80, 223-243		54
155	Can ordinary single-reference coupled-cluster methods describe potential energy surfaces with nearly spectroscopic accuracy? The renormalized coupled-cluster study of the vibrational spectrum of HF. <i>Journal of Chemical Physics</i> , 2001 , 115, 5796-5804	3.9	53

154	The state-selective coupled cluster method for quasi-degenerate electronic states. <i>Molecular Physics</i> , 1998 , 94, 225-234	1.7	53
153	A study of 1A1-3B1 separation in CH2 using orthogonally spin-adapted state-universal and state-specific coupled-cluster methods. <i>Chemical Physics Letters</i> , 1994 , 224, 267-274	2.5	52
152	The Ground State Electronic Energy of Benzene. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 8922-8924	2.4	52
151	Extension of coupled-cluster theory with a noniterative treatment of connected triply excited clusters to three-body Hamiltonians. <i>Physical Review C</i> , 2013 , 88,	2.7	51
150	Automated derivation and parallel computer implementation of renormalized and active-space coupled-cluster methods. <i>International Journal of Quantum Chemistry</i> , 2006 , 106, 79-97	2.1	51
149	Orthogonally spin-adapted single-reference coupled-cluster formalism: Linear response calculation of static properties. <i>Journal of Chemical Physics</i> , 1995 , 102, 6511-6524	3.9	51
148	Experimental and theoretical UV characterizations of acetylacetone and its isomers. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 3920-6	2.8	50
147	Potential energy surfaces of NaFH. <i>Journal of Chemical Physics</i> , 1998 , 108, 5349-5377	3.9	50
146	Electronic structure of the S1 state in methylcobalamin: insight from CASSCF/MC-XQDPT2, EOM-CCSD, and TD-DFT calculations. <i>Journal of Computational Chemistry</i> , 2013 , 34, 987-1004	3.5	49
145	Combining active-space coupled-cluster methods with moment energy corrections via the CC(P;Q) methodology, with benchmark calculations for biradical transition states. <i>Journal of Chemical Physics</i> , 2012 , 136, 144104	3.9	49
144	The State-Universal Multi-Reference Coupled-Cluster Theory: An Overview of Some Recent Advances. <i>International Journal of Molecular Sciences</i> , 2002 , 3, 676-709	6.3	49
143	Orthogonally spin-adapted single-reference coupled-cluster formalism: Linear response calculation of higher-order static properties. <i>Journal of Chemical Physics</i> , 1996 , 104, 8566-8585	3.9	47
142	Communication: Approaching exact quantum chemistry by cluster analysis of full configuration interaction quantum Monte Carlo wave functions. <i>Journal of Chemical Physics</i> , 2018 , 149, 151101	3.9	47
141	Computational investigation of the conrotatory and disrotatory isomerization channels of bicyclo[1.1.0]butane to buta-1,3-diene: a completely renormalized coupled-cluster study. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 734-42	2.8	46
140	Non-iterative corrections to extended coupled-cluster energies employing the generalized method of moments of coupled-cluster equations. <i>Molecular Physics</i> , 2005 , 103, 2191-2213	1.7	46
139	The nonadditive interactions in the Ar2HF and Ar2HCl clusters: An ab initio study. <i>Journal of Chemical Physics</i> , 1993 , 99, 6732-6741	3.9	46
138	Solving the single-reference coupled-cluster equations involving highly excited clusters in quasidegenerate situations. <i>Journal of Chemical Physics</i> , 1994 , 100, 5857-5869	3.9	46
137	Merging Active-Space and Renormalized Coupled-Cluster Methods via the CC(P;Q) Formalism, with Benchmark Calculations for Singlet-Triplet Gaps in Biradical Systems. <i>Journal of Chemical Theory and Computation</i> , 2012 , 8, 4968-88	6.4	44

136	Active-space symmetry-adapted-cluster configuration-interaction and equation-of-motion coupled-cluster methods for high accuracy calculations of potential energy surfaces of radicals. <i>Journal of Chemical Physics</i> , 2007 , 126, 164111	3.9	44
135	Coupled-Cluster approaches with an approximate account of triply and quadruply excited clusters: Implementation of the orthogonally spin-adapted CCD + ST(CCD), CCSD + T(CCSD), and ACPQ + ST(ACPQ) formalisms. <i>International Journal of Quantum Chemistry</i> , 1995 , 55, 133-146	2.1	44
134	Approximate account of connected quadruply excited clusters in multi-reference Hilbert space coupled-cluster theory. Application to planar H4 models. <i>Chemical Physics Letters</i> , 1993 , 210, 243-252	2.5	43
133	The Usefulness of Exponential Wave Function Expansions Employing One- and Two-Body Cluster Operators in Electronic Structure Theory: The Extended and Generalized Coupled-Cluster Methods. <i>Advances in Quantum Chemistry</i> , 2006 , 51, 1-57	1.4	40
132	The Electronic Structure and Vibrational Spectrum of trans-HNOO. <i>Journal of Physical Chemistry A</i> , 2004 , 108, 2893-2903	2.8	40
131	The state-universal multi-reference coupled-cluster theory with perturbative description of core virtual excitations. <i>Chemical Physics Letters</i> , 2001 , 334, 89-98	2.5	40
130	Coupled quasidiabatic potential energy surfaces for LiFH. <i>Journal of Chemical Physics</i> , 2002 , 116, 8353	3.9	40
129	Photodissociation of LiFH and NaFH van der Waals complexes: A semiclassical trajectory study. <i>Journal of Chemical Physics</i> , 2001 , 115, 7945-7952	3.9	39
128	An ab initio determination of 1A1-3B1 energy gap in CH2 using orthogonally spin-adapted state-universal and state-specific coupled-cluster methods. <i>Chemical Physics Letters</i> , 1994 , 230, 377-386	2.5	39
127	Detailed chemical kinetic modeling of JP-10 (exo-tetrahydrodicyclopentadiene) high-temperature oxidation: Exploring the role of biradical species in initial decomposition steps. <i>International Journal of Chemical Kinetics</i> , 2012 , 44, 179-193	1.4	38
126	Property Evaluation Using the Two-Reference State-Universal Coupled-Cluster Method. <i>The Journal of Physical Chemistry</i> , 1995 , 99, 15354-15368		38
125	Electron correlation in one dimension: Coupled cluster approaches to cyclic polyene electron models. <i>International Journal of Quantum Chemistry</i> , 1992 , 42, 135-164	2.1	38
124	Complete set of solutions of the generalized Bloch equation. <i>International Journal of Quantum Chemistry</i> , 2000 , 80, 757-781	2.1	37
123	The photoabsorption spectrum of Na2FH van der Waals molecule: Comparison of theory and experiment for a harpooning reaction studied by transition state spectroscopy. <i>Journal of Chemical Physics</i> , 1998 , 108, 5378-5390	3.9	37
122	Is the mechanism of the [2+2] cycloaddition of cyclopentyne to ethylene concerted or biradical? A completely renormalized coupled cluster study. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 367-78	2.8	36
121	Exactness of two-body cluster expansions in many-body quantum theory. <i>Physical Review Letters</i> , 2003 , 90, 113001	7.4	36
120	On the solution of coupled-cluster equations in the fully correlated limit of cyclic polyene model. <i>International Journal of Quantum Chemistry</i> , 1991 , 40, 9-34	2.1	36
119	Method of moments for the continuous transition between the Brillouin-Wigner-type and Rayleigh-Schrödinger-type multireference coupled cluster theories. <i>Molecular Physics</i> , 2009 , 107, 1209-1221	1.7	34

118	Renormalized coupled-cluster calculations of reactive potential energy surfaces: A comparison of the CCSD(T), renormalized CCSD(T), and full configuration interaction results for the collinear BeFH system. <i>Journal of Chemical Physics</i> , 2002 , 117, 3617-3624	3.9	34
117	Benchmarking the completely renormalised equation-of-motion coupled-cluster approaches for vertical excitation energies. <i>Molecular Physics</i> , 2015 , 113, 3085-3127	1.7	32
116	State-selective multi-reference coupled-cluster theory employing the single-reference formalism: Application to an excited state of H8. <i>Journal of Chemical Physics</i> , 1995 , 102, 3301-3306	3.9	32
115	Dynamics of harpooning studied by transition state spectroscopy Na ⁺ FH. <i>Faraday Discussions</i> , 1997 , 108, 411-425	3.6	31
114	Extrapolating potential energy surfaces by scaling electron correlation at a single geometry. <i>Chemical Physics Letters</i> , 2006 , 430, 448-453	2.5	31
113	New Alternatives for Electronic Structure Calculations: Renormalized, Extended, and Generalized Coupled-Cluster Theories. <i>Progress in Theoretical Chemistry and Physics</i> , 2003 , 119-206	0.6	31
112	Application of renormalized coupled-cluster methods to potential function of water. <i>Theoretical Chemistry Accounts</i> , 2008 , 120, 59-78	1.9	30
111	Renormalized Coupled-Cluster Calculations of Reactive Potential Energy Surfaces: The BeFH System. <i>Journal of Physical Chemistry A</i> , 2004 , 108, 8878-8893	2.8	29
110	Method of moments of coupled-cluster equations: The quasivariational and quadratic approximations. <i>Journal of Chemical Physics</i> , 2003 , 119, 2951-2962	3.9	28
109	Parallelization of multi-reference coupled-cluster method. <i>Parallel Computing</i> , 2000 , 26, 913-943	1	28
108	Dynamics of harpooning studied by transition state spectroscopy. II. Li ⁺ FH. <i>Journal of Chemical Physics</i> , 2000 , 113, 9897-9900	3.9	28
107	Geometries, Binding Energies, Ionization Potentials, and Electron Affinities of Metal Clusters: Mg _n O, n = 1-7. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 13275-13286	3.8	27
106	Combining active-space coupled-cluster approaches with moment energy corrections via the CC(P;Q) methodology: connected quadruple excitations. <i>Molecular Physics</i> , 2017 , 115, 2860-2891	1.7	27
105	Breaking bonds of open-shell species with the restricted open-shell size extensive left eigenstate completely renormalized coupled-cluster method. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 11873-84	2.8	27
104	Coupled-cluster and configuration-interaction calculations for heavy nuclei. <i>Physical Review Letters</i> , 2007 , 98, 112501	7.4	27
103	Extension of the active-space equation-of-motion coupled-cluster methods to radical systems: The EA-EOMCCSDt and IP-EOMCCSDt approaches. <i>International Journal of Quantum Chemistry</i> , 2006 , 106, 2854-2874	2.1	27
102	Method of Moments of Coupled-Cluster Equations: Externally Corrected Approaches Employing Configuration Interaction Wave Functions. <i>International Journal of Molecular Sciences</i> , 2002 , 3, 475-497	6.3	26
101	Application of the CC(P;Q) Hierarchy of Coupled-Cluster Methods to the Beryllium Dimer. <i>Journal of Physical Chemistry A</i> , 2018 , 122, 1350-1368	2.8	25

100	On the significance of quadruply excited clusters in coupled-cluster calculations for the low-lying states of BN and C2. <i>Chemical Physics Letters</i> , 2008 , 461, 321-326	2.5	25
99	Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing "Black-Box" Approaches for Molecular Potential Energy Surfaces. <i>ACS Symposium Series</i> , 2002 , 31-64	0.4	25
98	Spherical tensor theory of long-range interactions in a system of N arbitrary molecules including quantum-mechanical many-body effects. <i>Molecular Physics</i> , 1986 , 59, 1067-1083	1.7	25
97	Accurate excited-state energetics by a combination of Monte Carlo sampling and equation-of-motion coupled-cluster computations. <i>Journal of Chemical Physics</i> , 2019 , 150, 111101	3.9	24
96	Spherical tensor theory of long-range interactions in a system of N arbitrary molecules including quantum-mechanical many-body effects. <i>Molecular Physics</i> , 1986 , 59, 1085-1095	1.7	24
95	Communication: Determining the lowest-energy isomer of Au ₈ : 2D, or not 2D. <i>Journal of Chemical Physics</i> , 2013 , 139, 091101	3.9	22
94	Incorporating a completely renormalized coupled cluster approach into a composite method for thermodynamic properties and reaction paths. <i>Journal of Chemical Physics</i> , 2012 , 136, 144109	3.9	22
93	Potential energy curves for the HF and CH ₃ F anions: a coupled cluster study. <i>Journal of Molecular Structure</i> , 1997 , 436-437, 503-536	3.4	21
92	Extrapolating potential energy surfaces by scaling electron correlation: isomerization of bicyclobutane to butadiene. <i>Journal of Chemical Physics</i> , 2008 , 128, 154116	3.9	21
91	Non-iterative coupled-cluster methods employing multi-reference perturbation theory wave functions. <i>Computational and Theoretical Chemistry</i> , 2006 , 771, 89-104		21
90	Photoluminescence, photophysics, and photochemistry of the VB defect in hexagonal boron nitride. <i>Physical Review B</i> , 2020 , 102,	3.3	21
89	A comparative assessment of the perturbative and renormalized coupled cluster theories with a noniterative treatment of triple excitations for thermochemical kinetics, including a study of basis set and core correlation effects. <i>Journal of Chemical Physics</i> , 2008 , 128, 044108	3.9	20
88	Doubly electron-attached and doubly ionised equation-of-motion coupled-cluster methods with full and active-space treatments of 4-particle-hole and 4-hole-particle excitations: the role of orbital choices. <i>Molecular Physics</i> , 2014 , 112, 868-885	1.7	19
87	Bound and quasibound states of the Na ⁺ FH van der Waals molecule. <i>Journal of Chemical Physics</i> , 2000 , 112, 189-202	3.9	19
86	Molecular quadrupole moment functions of HF and N ₂ . II. Rovibrational effects. <i>Journal of Chemical Physics</i> , 1996 , 104, 4716-4727	3.9	19
85	Spherical tensor theory of long-range interactions between two molecules. <i>International Journal of Quantum Chemistry</i> , 1984 , 25, 449-473	2.1	19
84	Systematic design of active spaces for multi-reference calculations of singlet-triplet gaps of organic diradicals, with benchmarks against doubly electron-attached coupled-cluster data. <i>Journal of Chemical Physics</i> , 2017 , 147, 164120	3.9	18
83	Behavior of coupled cluster energy in the strongly correlated limit of the cyclic polyene model. Comparison with the exact results. <i>International Journal of Quantum Chemistry</i> , 1992 , 42, 165-191	2.1	18

82	Theoretical studies of lithium bonding in lithium chloride/aliphatic amine complexes. <i>Chemical Physics</i> , 1985 , 94, 55-63	2.3	18
81	Aerobic oxidation of methanol to formic acid on Au8-: benchmark analysis based on completely renormalized coupled-cluster and density functional theory calculations. <i>Journal of Physical Chemistry A</i> , 2013 , 117, 10416-27	2.8	17
80	Can a single-reference approach provide a balanced description of ground and excited states? A comparison of the completely renormalized equation-of-motion coupled-cluster method with multireference quasidegenerate perturbation theory near a conical intersection and along a photodissociation coordinate in ammonia. <i>Journal of Physical Chemistry A</i> , 2005 , 109, 11643-6	2.8	17
79	A General Reaction Path Dual-Level Direct Dynamics Calculation of the Reaction of Hydroxyl Radical with Dimethyl Sulfide. <i>Journal of Physical Chemistry A</i> , 2000 , 104, 8779-8786	2.8	17
78	Coupled-cluster approaches with an approximate account of triexcitations and the optimized-inner-projection technique. III. Lower bounds to the ground-state correlation energy of cyclic-polyene model systems. <i>Physical Review A</i> , 1990 , 42, 5155-5167	2.6	17
77	Nuclear Structure Calculations with Coupled Cluster Methods from Quantum Chemistry. <i>Nuclear Physics A</i> , 2005 , 752, 299-308	1.3	16
76	Molecular quadrupole moment function of ammonia. <i>Journal of Chemical Physics</i> , 1996 , 105, 11068-11074	3.9	16
75	Diffusion of Atomic Oxygen on the Si(100) Surface. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 12649-12658	2.8	15
74	Low-lying valence excited states of CNC, C2N, N3, and NCO studied using the electron-attached and ionized symmetry-adapted-cluster configuration-interaction and equation-of-motion coupled-cluster methodologies. <i>Molecular Physics</i> , 2009 , 107, 871-880	1.7	15
73	A comparison of single-reference coupled-cluster and multi-reference configuration interaction methods for representative cuts of the potential energy surface. <i>Computational and Theoretical Chemistry</i> , 2008 , 859, 22-29		14
72	Renormalized coupled-cluster methods: Theoretical foundations and application to the potential function of water. <i>Progress in Theoretical Chemistry and Physics</i> , 2007 , 63-121	0.6	14
71	Communication: existence of the doubly excited state that mediates the photoionization of azulene. <i>Journal of Chemical Physics</i> , 2013 , 138, 201102	3.9	13
70	Comparison of the completely renormalized equation-of-motion coupled-cluster and Quantum Monte Carlo results for the low-lying electronic states of methylene. <i>Molecular Physics</i> , 2010 , 108, 2633-2646	1.7	13
69	The convergence of energy expansions for molecules in electrostatic fields: A linear-response coupled-cluster study. <i>Journal of Mathematical Chemistry</i> , 1997 , 21, 51-70	2.1	13
68	Bound and quasi-bound states of the Li ⁺ FH van der Waals molecule. <i>International Journal of Quantum Chemistry</i> , 2000 , 80, 916-933	2.1	13
67	Extension of Coupled Cluster Methodology to Open Shells: State Universal Approach 1992 , 287-303		13
66	Economical Doubly Electron-Attached Equation-of-Motion Coupled-Cluster Methods with an Active-Space Treatment of Three-Particle-One-Hole and Four-Particle-Two-Hole Excitations. <i>Journal of Physical Chemistry A</i> , 2017 , 121, 3469-3485	2.8	12
65	Intricacies of van der Waals Interactions in Systems with Elongated Bonds Revealed by Electron-Groups Embedding and High-Level Coupled-Cluster Approaches. <i>Journal of Chemical Theory and Computation</i> , 2017 , 13, 5404-5419	6.4	12

64	Ab initio coupled-cluster and configuration interaction calculations for O16 using the VUCOM interaction. <i>Physical Review C</i> , 2009 , 79,	2.7	12
63	Note on the multipole expansion in the spherical tensor form. <i>Journal of Physics A</i> , 1985 , 18, L739-L743		12
62	Vibrational dependence of the dipole moment and radiative transition probabilities in the X1 Σ^+ state of HF: a linear-response coupled-cluster study. <i>Molecular Physics</i> , 1998 , 94, 55-64	1.7	12
61	Coupled-cluster and configuration-interaction calculations for odd-A heavy nuclei. <i>Physical Review Letters</i> , 2008 , 101, 052501	7.4	11
60	Biorthogonal method of moments of coupled-cluster equations: Alternative derivation, further considerations, and application to a model magnetic system. <i>International Journal of Quantum Chemistry</i> , 2008 , 108, 2128-2149	2.1	11
59	Spherical tensor theory of long-range interactions in a system of N arbitrary molecules including quantum-mechanical many-body effects. <i>Molecular Physics</i> , 1986 , 59, 1097-1111	1.7	11
58	The non-additivity of long-range interactions in second-order perturbation theory in the light of spherical tensor formalism. <i>Chemical Physics Letters</i> , 1984 , 110, 496-503	2.5	11
57	Center-of-mass problem in truncated configuration interaction and coupled-cluster calculations. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2009 , 679, 334-339	4.2	10
56	Vibrational dependence of the dipole moment and radiative transition probabilities in the X1Sigma ⁺ state of HF: a linear-response coupled-cluster study. <i>Molecular Physics</i> , 1998 , 94, 55-64	1.7	10
55	Bound and quasi-bound states of the Li ⁺ FH van der Waals molecule: The effects of the potential energy surface and of the basis set superposition error. <i>Computational and Theoretical Chemistry</i> , 2002 , 591, 151-174		10
54	Higher-order contributions to the intermolecular energy in the perturbation treatment of long-range forces in the light of spherical tensor theory. <i>Chemical Physics Letters</i> , 1984 , 106, 364-372	2.5	10
53	Geometries and adiabatic excitation energies of the low-lying valence states of CNC, C2N, N3 and NCO studied with the electron-attached and ionized equation-of-motion coupled-cluster methodologies. <i>Physica Scripta</i> , 2011 , 84, 028110	2.6	9
52	Local Correlation Calculations Using Standard and Renormalized Coupled-Cluster Methods 2009 ,		9
51	MAPLE symbolic computation of the long-range many-body intermolecular potentials: Three-body induction forces between two atoms and a linear molecule. <i>International Journal of Quantum Chemistry</i> , 1993 , 47, 261-305	2.1	9
50	Higher-order interaction energies for a system of N arbitrary molecules in the light of spherical tensor theory. <i>Journal of Mathematical Physics</i> , 1986 , 27, 2165-2187	1.2	9
49	Accelerating convergence of equation-of-motion coupled-cluster computations using the semi-stochastic CC(P;Q) formalism. <i>Molecular Physics</i> , 2020 , 118, e1817592	1.7	9
48	Proton Abstraction Mediates Interactions between the Super Photobase FR0-SB and Surrounding Alcohol Solvent. <i>Journal of Physical Chemistry B</i> , 2019 , 123, 8448-8456	3.4	8
47	Performance of the completely renormalized equation-of-motion coupled-cluster method in calculations of excited-state potential cuts of water. <i>Computational and Theoretical Chemistry</i> , 2014 , 1040-1041, 20-34	2	8

46	Coupled-cluster calculations for ground and excited states of closed- and open-shell nuclei using methods of quantum chemistry. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005 , 31, S1291-S1299 ^{2.9}	8
45	Infrared absorption line strengths of the Na ⁺ FH van der Waals molecule. <i>Journal of Chemical Physics</i> , 1999 , 110, 5634-5638	3.9 8
44	Shifts in Excitation Energies Induced by Hydrogen Bonding: A Comparison of the Embedding and Supermolecular Time-Dependent Density Functional Theory Calculations with the Equation-of-Motion Coupled-Cluster Results. <i>Progress in Theoretical Chemistry and Physics</i> , 2012 , 219-248	0.6 7
43	Symmetry-adapted-cluster configuration-interaction and equation-of-motion coupled-cluster studies of electronically excited states of copper tetrachloride and copper tetrabromide dianions. <i>Chemical Physics</i> , 2012 , 399, 94-110	2.3 7
42	New Alternatives for Accurate Electronic Structure Calculations of Potential Energy Surfaces Involving Bond Breaking. <i>ACS Symposium Series</i> , 2007 , 37-73	0.4 7
41	Is Externally Corrected Coupled Cluster Always Better Than the Underlying Truncated Configuration Interaction?. <i>Journal of Chemical Theory and Computation</i> , 2021 , 17, 4006-4027	6.4 7
40	Application of the coupled-cluster CC(P;Q) approaches to the magnesium dimer. <i>Molecular Physics</i> , 2019 , 117, 1486-1506	1.7 7
39	Evaluation of density functional methods on the geometric and energetic descriptions of species involved in Cu ⁺ -promoted catalysis. <i>Journal of Molecular Modeling</i> , 2013 , 19, 5457-67	2 6
38	Communication: Coupled-cluster interpretation of the photoelectron spectrum of Au ⁺ . <i>Journal of Chemical Physics</i> , 2014 , 141, 101102	3.9 6
37	Advances in the Theory of Atomic and Molecular Systems. <i>Progress in Theoretical Chemistry and Physics</i> , 2009 ,	0.6 6
36	Towards Classification and Analytical Description of Molecular Interactions Including Quantum-Mechanical Many-Body Effects. <i>Topics in Molecular Organization and Engineering</i> , 1988 , 417-505	6
35	High-level coupled-cluster energetics by Monte Carlo sampling and moment expansions: Further details and comparisons. <i>Journal of Chemical Physics</i> , 2021 , 154, 124103	3.9 6
34	Quantum computation solves a half-century-old enigma: Elusive vibrational states of magnesium dimer found. <i>Science Advances</i> , 2020 , 6, eaay4058	14.3 5
33	Frontiers in Quantum Systems in Chemistry and Physics. <i>Progress in Theoretical Chemistry and Physics</i> , 2008 ,	0.6 5
32	NONITERATIVE COUPLED-CLUSTER METHODS FOR EXCITED ELECTRONIC STATES 2006 , 45-106	5
31	Intriguing accuracies of the exponential wave function expansions exploiting finite two-body correlation operators in calculations for many-electron systems. <i>Computational and Theoretical Chemistry</i> , 2006 , 768, 3-16	5
30	Lifetimes and dissociation pathways of the quasi-bound states of the Na ⁺ FH van der Waals molecule. <i>Journal of Molecular Structure</i> , 2000 , 555, 43-60	3.4 5
29	Supplement to spherical tensor theory of long-range interactions between two molecules. <i>International Journal of Quantum Chemistry</i> , 1985 , 28, 375-386	2.1 5

28	Optimization of the Reax force field for the lithium-oxygen system using a high fidelity charge model. <i>Journal of Chemical Physics</i> , 2020 , 153, 084107	3.9	5
27	Double electron-attachment equation-of-motion coupled-cluster methods with up to 4-particle-hole excitations: improved implementation and application to singlet-triplet gaps in ortho-, meta-, and para-benzyne isomers. <i>Molecular Physics</i> , 2020 , 234, 1966534	1.7	5
26	Femtosecond real-time probing of reactions MMXVII: The predissociation of sodium iodide in the A 0+ state. <i>Chemical Physics Letters</i> , 2017 , 683, 121-127	2.5	4
25	COUPLED-CLUSTER THEORY FOR NUCLEI. <i>International Journal of Modern Physics B</i> , 2006 , 20, 5338-5345	1.1	4
24	Linear Scaling Local Correlation Extensions of the Standard and Renormalized Coupled-Cluster Methods. <i>Progress in Theoretical Chemistry and Physics</i> , 2009 , 131-195	0.6	4
23	Steric effects in light-induced solvent proton abstraction. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 19613-19622	3.6	4
22	Internal Conversion between Bright (1) and Dark (2) States in s-Butadiene and s-Hexatriene. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 9720-9729	6.4	4
21	Coupled-cluster interpretation of the photoelectron spectrum of Ag ₃ (.). <i>Journal of Chemical Physics</i> , 2016 , 145, 084306	3.9	3
20	Advances in the Theory of Quantum Systems in Chemistry and Physics. <i>Progress in Theoretical Chemistry and Physics</i> , 2012 ,	0.6	3
19	Advances in the Theory of Atomic and Molecular Systems. <i>Progress in Theoretical Chemistry and Physics</i> , 2009 ,	0.6	3
18	Ab initio coupled cluster calculations for nuclei using methods of quantum chemistry. <i>European Physical Journal A</i> , 2005 , 25, 485-488	2.5	3
17	Can NO ₂ ⁺ exist in bent or cyclic forms?. <i>Chemical Physics Letters</i> , 2001 , 334, 381-386	2.5	3
16	Isoenergetic two-photon excitation enhances solvent-to-solute excited-state proton transfer. <i>Journal of Chemical Physics</i> , 2020 , 153, 224301	3.9	3
15	Ab initio coupled-cluster and multi-reference configuration interaction studies of the low-lying electronic states of 1,2,3,4-cyclobutanetetraone. <i>Molecular Physics</i> , 2016 , 114, 695-708	1.7	2
14	Quantum Systems in Chemistry and Physics. <i>Progress in Theoretical Chemistry and Physics</i> , 2012 ,	0.6	2
13	Bridging quantum chemistry and nuclear structure theory: Coupled-cluster calculations for closed- and open-shell nuclei. <i>AIP Conference Proceedings</i> , 2005 ,	0	2
12	Spherical tensor theory of long-range interactions in a system of N arbitrary molecules including quantum-mechanical many-body effects. <i>Molecular Physics</i> , 1989 , 66, 805-818	1.7	2
11	On the addition theorems for solid spherical harmonics. <i>Reports on Mathematical Physics</i> , 1986 , 24, 187-198	1.2	2

- 10 Excited-State Dynamics of a Substituted Fluorene Derivative. The Central Role of Hydrogen Bonding Interactions with the Solvent. *Journal of Physical Chemistry B*, **2021**, 125, 12242-12253 3.4 2
- 9 High-level coupled-cluster energetics by merging moment expansions with selected configuration interaction. *Journal of Chemical Physics*, **2021**, 155, 174114 3.9 2
- 8 Controlling Quantum Interference between Virtual and Dipole Two-Photon Optical Excitation Pathways Using Phase-Shaped Laser Pulses. *Journal of Physical Chemistry A*, **2021**, 125, 7534-7544 2.8 2
- 7 Cartesian-Spherical Transformation Formalism and the Theoretical Insight into Many-Body Long-Range Forces of the Electrostatic Origin in Multimolecular Systems **1987**, 299-302 1
- 6 Invariance properties of the multipole expansion. *International Journal of Quantum Chemistry*, **1982**, 22, 293-298 2.1 1
- 5 Bound and quasi-bound states of the Li⁺FH van der Waals molecule **2000**, 80, 916 1
- 4 Complete set of solutions of the generalized Bloch equation **2000**, 80, 757 1
- 3 Ab initio coupled cluster calculations for nuclei using methods of quantum chemistry **2005**, 485-488
- 2 Intramolecular Relaxation Dynamics Mediated by Solvent-Solute Interactions of Substituted Fluorene Derivatives. Solute Structural Dependence. *Journal of Physical Chemistry B*, **2021**, 125, 12486-12499 3.4
- 1 Parallelization of a legacy research program using OpenMP. *ACM SIGPLAN Fortran Forum*, **2000**, 19, 16-23.6