Hermann Stoll

List of Publications by Year in Descending Order

95 papers	29,794 citations	52 h-index	97 g-index
97 ext. papers	32,269 ext. citations	4 avg, IF	6.69 L-index

#	Paper	IF	Citations
95	Quantification of Competing Magnetic States and Switching Pathways in Curved Nanowires by Direct Dynamic Imaging. *ACS Nano*, **2020**, 14, 13324-13332	16.7	5
94	Direct Imaging of High-Frequency Multimode Spin Wave Propagation in Cobalt-Iron Waveguides Using X-Ray Microscopy beyond 10 GHz. *Physica Status Solidi - Rapid Research Letters*, **2020**, 14, 2000373	2.5	3
93	Magnetic State Control via Field-Angle-Selective Switching in Asymmetric Rings. *Physical Review Applied*, **2020**, 14,	4.3	1
92	Ptychographic imaging and micromagnetic modeling of thermal melting of nanoscale magnetic domains in antidot lattices. *AIP Advances*, **2020**, 10, 125122	1.5	1
91	Toward a wavefunction-based treatment of strong electron correlation in extended systems by means of incremental methods. *Journal of Chemical Physics*, **2019**, 151, 044104	3.9	6
90	Coherent Excitation of Heterosymmetric Spin Waves with Ultrashort Wavelengths. *Physical Review Letters*, **2019**, 122, 117202	7.4	36
89	Nanoscale X-ray imaging of spin dynamics in yttrium iron garnet. *Journal of Applied Physics*, **2019**, 126, 173909	2.5	12
88	Direct observation of coherent magnons with suboptical wavelengths in a single-crystalline ferrimagnetic insulator. *Physical Review B*, **2019**, 100,	3.3	19
87	Dealing with the exponential wall in electronic structure calculations. *Journal of Chemical Physics*, **2017**, 146, 194107	3.9	14
86	All-electron-derived pseudopotentials for embedding: the polarisability of the iodine anion in a water cage. *Molecular Physics*, **2016**, 114, 941-946	1.7	
85	Combining density functional and incremental post-Hartree-Fock approaches for van der Waals dominated adsorbate-surface interactions: Ag2/graphene. *Journal of Chemical Physics*, **2015**, 143, 102804	3.9	26
84	Imaging spin dynamics on the nanoscale using X-Ray microscopy. *Frontiers in Physics*, **2015**, 3,	3.9	39
83	Filling the Gap between Pseudopotential and All-Electron Schemes: Frozen-Core Calculations with Efficient Use of Density-Fitting. *Journal of Chemical Theory and Computation*, **2014**, 10, 3857-62	6.4	1
82	Unidirectional sub-100-ps magnetic vortex core reversal. *Physical Review B*, **2014**, 90,	3.3	20
81	Approaching the bulk limit with finite cluster calculations using local increments: the case of LiH. *Journal of Chemical Physics*, **2012**, 136, 074106	3.9	19
80	Magnetic vortex core reversal by excitation of spin waves. *Nature Communications*, **2011**, 2, 279	17.4	178
79	Extrapolating wavefunction-based ab initio results from finite clusters to the bulk solid The case of group 1 and 11 metals (Li,Cu). *Chemical Physics Letters*, **2011**, 501, 283-286	2.5	2

78	An incremental correlation approach to excited state energies based on natural transition/localized orbitals. *Journal of Chemical Physics*, **2011**, 134, 034122	3.9	43
77	A theoretical study of ZnH2: a case of very strong Darling□Dennison resonance. *Molecular Physics*, **2010**, 108, 487-499	1.7	6
76	Simultaneous adsorption of benzene and dioxygen in CuHY zeolites as a precursor process to the aerobic oxidation of benzene to phenol. *Physical Chemistry Chemical Physics*, **2010**, 12, 6345-51	3.6	11
75	Can incremental expansions cope with high-order coupled-cluster contributions?. *Molecular Physics*, **2010**, 108, 243-248	1.7	14
74	Towards an incremental expansion of strong correlation effects in solids. *Annalen Der Physik*, **2010**, 508, 355-362	2.6	6
73	Vortex core switching by coherent excitation with single in-plane magnetic field pulses. *Physical Review Letters*, **2009**, 102, 077201	7.4	83
72	An incremental coupled-cluster approach to metallic lithium. *Chemical Physics Letters*, **2009**, 469, 90-93	2.5	22
71	Energy-consistent pseudopotentials for the 5d elements--benchmark calculations for oxides, nitrides, and Pt(2). *Journal of Physical Chemistry A*, **2009**, 113, 12478-84	2.8	13
70	Toward a wave-function-based treatment of metals: extrapolation from finite clusters. *Journal of Physical Chemistry A*, **2009**, 113, 11483-6	2.8	7
69	Energy-consistent pseudopotentials and correlation consistent basis sets for the 5d elements Hf-Pt. *Journal of Chemical Physics*, **2009**, 130, 164108	3.9	483
68	Adsorption of Benzene to Copper in CuHY Zeolite. *Journal of Physical Chemistry C*, **2009**, 113, 4107-4116	3.8	25
67	Accurate potential energy surface and calculated spectroscopic properties for CdH2 isotopomers. *Journal of Physical Chemistry A*, **2009**, 113, 11772-82	2.8	4
66	Adsorption of dioxygen to copper in CuHY zeolite. *Physical Chemistry Chemical Physics*, **2009**, 11, 8855-66	3.6	17
65	On the performance of two-component energy-consistent pseudopotentials in atomic Fock-space coupled cluster calculations. *Journal of Chemical Physics*, **2008**, 128, 024106	3.9	13
64	Improved dipole moments by combining short-range gradient-corrected density-functional theory with long-range wave-function methods. *Physical Review A*, **2007**, 76,	2.6	30
63	Calculated spectroscopic properties of HgH2. *Molecular Physics*, **2007**, 105, 1193-1205	1.7	13
62	Energy-consistent relativistic pseudopotentials and correlation consistent basis sets for the 4d elements Y-Pd. *Journal of Chemical Physics*, **2007**, 126, 124101	3.9	714
61	Lattice structure of mercury: Influence of electronic correlation. *Physical Review B*, **2006**, 74,	3.3	54

60	Relativistic small-core energy-consistent pseudopotentials for the alkaline-earth elements from Ca to Ra. *Journal of Chemical Physics*, **2006**, 124, 034107	3.9	160
59	On the spectroscopic and thermochemical properties of ClO, BrO, IO, and their anions. *Journal of Physical Chemistry A*, **2006**, 110, 13877-83	2.8	606
58	Magnetic vortex core reversal by excitation with short bursts of an alternating field. *Nature*, **2006**, 444, 461-4	50.4	675
57	Large-core vs. small-core pseudopotentials: A case study for Au2. *Chemical Physics Letters*, **2006**, 429, 289-293	2.5	10
56	On the accuracy of small-core and large-core pseudopotentials **2006**, 973-974		
55	Energy-consistent pseudopotentials for group 11 and 12 atoms: adjustment to multi-configuration Dirac–Hartree–Fock data. *Chemical Physics*, **2005**, 311, 227-244	2.3	763
54	On the accuracy of correlation-energy expansions in terms of local increments. *Journal of Chemical Physics*, **2005**, 123, 144108	3.9	110
53	A systematic ab initio study of the equilibrium geometry and vibrational wave numbers of bismuthine. *Journal of Chemical Physics*, **2004**, 120, 10404-13	3.9	9
52	Convergence of the ab initio many-body expansion for the cohesive energy of solid mercury. *Physical Review B*, **2004**, 70,	3.3	64
51	Comment on "Atomization energies and enthalpies of formation of the SnBin (n=1–3) gaseous molecules by Knudsen cell mass spectrometry" [J. Chem. Phys. 116, 6957 (2002)]. *Journal of Chemical Physics*, **2003**, 118, 4766-4767	3.9	4
50	Systematically convergent basis sets with relativistic pseudopotentials. II. Small-core pseudopotentials and correlation consistent basis sets for the post-d group 16–18 elements. *Journal of Chemical Physics*, **2003**, 119, 11113-11123	3.9	1590
49	Valence basis sets for relativistic energy-consistent small-core actinide pseudopotentials. *Journal of Chemical Physics*, **2003**, 118, 487-496	3.9	518
48	On the coupling of multi-configuration self-consistent-field and density-functional information. *Chemical Physics Letters*, **2003**, 376, 141-147	2.5	22
47	Relativistic energy-consistent pseudopotentials--recent developments. *Journal of Computational Chemistry*, **2002**, 23, 767-78	3.5	184
46	Electronic structure and spectroscopy of monohalides of metals of group I-B. *Chemical Physics*, **2002**, 280, 71-102	2.3	52
45	Transferable Scaling Factors for Vibrational Force Fields of Halogenated Molecules Based on Energy-Consistent Pseudopotentials. *Journal of Physical Chemistry A*, **2002**, 106, 6810-6816	2.8	7
44	On the performance of energy-consistent spin–orbit pseudopotentials: (111)H revisited. *Chemical Physics Letters*, **2001**, 345, 490-496	2.5	23
43	A small-core multiconfiguration Dirac–Hartree–Fock-adjusted pseudopotential for Tl. Application to TlX (X = F, Cl, Br, I). *Theoretical Chemistry Accounts*, **2000**, 104, 22-28	1.9	122

42	Ab initio coupled-cluster calculations for the fcc and hcp structures of rare-gas solids. *Physical Review B*, **2000**, 62, 5482-5488	3.3	105
41	Small-core multiconfiguration-Dirac–Hartree–Fock-adjusted pseudopotentials for post-d main group elements: Application to PbH and PbO. *Journal of Chemical Physics*, **2000**, 113, 2563-2569	3.9	869
40	The accuracy of the pseudopotential approximation. III. A comparison between pseudopotential and all-electron methods for Au and AuH. *Journal of Chemical Physics*, **2000**, 113, 7110-7118	3.9	76
39	Wave-function-based correlated ab initio calculations on crystalline solids. *Physical Review B*, **1999**, 60, 5211-5216	3.3	71
38	Ab initio calculation of ground-state properties of rare-gas crystals. *Physical Review B*, **1999**, 60, 7905-7910	3.3	114
37	Ground-state properties of heavy alkali halides. *Physical Review B*, **1998**, 57, 4327-4331	3.3	35
36	Closed-shell interaction in silver and gold chlorides. *Journal of Chemical Physics*, **1998**, 109, 2339-2345	3.9	60
35	Cohesive properties of alkali halides. *Physical Review B*, **1997**, 56, 10121-10127	3.3	37
34	Quantum chemical approach to cohesive properties of NiO. *Physical Review B*, **1997**, 55, 10282-10288	3.3	64
33	Spin-orbit interaction in heavy group 13 atoms and TlAr. *Chemical Physics*, **1997**, 217, 19-27	2.3	70
32	The accuracy of the pseudopotential approximation. II. A comparison of various core sizes for indium pseudopotentials in calculations for spectroscopic constants of InH, InF, and InCl. *Journal of Chemical Physics*, **1996**, 105, 1052-1059	3.9	434
31	The accuracy of the pseudopotential approximation: non-frozen-core effects for spectroscopic constants of alkali fluorides XF (X = K, Rb, Cs). *Chemical Physics Letters*, **1996**, 255, 274-280	2.5	255
30	Correlation effects in MgO and CaO: Cohesive energies and lattice constants. *Physical Review B*, **1996**, 54, 13529-13535	3.3	55
29	The accuracy of the pseudopotential approximation. I. An analysis of the spectroscopic constants for the electronic ground states of InCl and InCl3 using various three valence electron pseudopotentials for indium. *Journal of Chemical Physics*, **1995**, 102, 2050-2062	3.9	70
28	Electron correlations for ground-state properties of group-IV semiconductors. *Physical Review B*, **1995**, 51, 10572-10578	3.3	56
27	Correlation effects in ionic crystals: The cohesive energy of MgO. *Physical Review B*, **1995**, 52, 4842-4848	3.3	81
26	On the importance of core polarization in heavy post-d elements: a pseudopotential calibration study for X2H6 (X = Si, Ge, Sn, Pb). *Molecular Physics*, **1995**, 86, 317-326	1.7	19
25	Ab initio energy-adjusted pseudopotentials for the noble gases Ne through Xe: Calculation of atomic dipole and quadrupole polarizabilities. *Journal of Chemical Physics*, **1995**, 102, 8942-8952	3.9	434

24	Adiabatic potential curves for the Cd2 dimer. *Chemical Physics Letters*, **1994**, 225, 233-239	2.5	33
23	Energy-adjusted pseudopotentials for the actinides. Parameter sets and test calculations for thorium and thorium monoxide. *Journal of Chemical Physics*, **1994**, 100, 7535-7542	3.9	1289
22	Ab initio energy-adjusted pseudopotentials for elements of groups 13-17. *Molecular Physics*, **1993**, 80, 1431-1441	1.7	2334
21	Accuracy of energy-adjusted quasirelativistic ab initio pseudopotentials. *Molecular Physics*, **1993**, 78, 1211-1224	1.7	342
20	Relativistic and correlation effects for element 105 (hahnium, Ha): a comparative study of M and MO (M = Nb, Ta, Ha) using energy-adjusted ab initio pseudopotentials. *The Journal of Physical Chemistry*, **1993**, 97, 5852-5859		608
19	A combination of quasirelativistic pseudopotential and ligand field calculations for lanthanoid compounds. *Theoretica Chimica Acta*, **1993**, 85, 441-450		612
18	On the correlation energy of graphite. *Journal of Chemical Physics*, **1992**, 97, 8449-8454	3.9	188
17	Correlation energy of diamond. *Physical Review B*, **1992**, 46, 6700-6704	3.3	343
16	The correlation energy of crystalline silicon. *Chemical Physics Letters*, **1992**, 191, 548-552	2.5	241
15	Ground state calculations of di-π-cyclooctatetraene cerium. *Journal of Chemical Physics*, **1991**, 94, 3011-3017	3.9	143
14	Ab initio pseudopotentials for Hg to Rn. *Molecular Physics*, **1991**, 74, 1265-1285	1.7	68
13	Ab initio pseudopotentials for Hg through Rn. *Molecular Physics*, **1991**, 74, 1245-1263	1.7	469
12	Pseudopotential approaches to Ca, Sr, and Ba hydrides. Why are some alkaline earth MX2 compounds bent?. *Journal of Chemical Physics*, **1991**, 94, 1360-1366	3.9	502
11	Energy-adjustedab initio pseudopotentials for the second and third row transition elements. *Theoretica Chimica Acta*, **1990**, 77, 123-141		6599
10	Semi-local pseudopotential calculations for the adiabatic potentials of alkali-neon systems. *Chemical Physics*, **1989**, 136, 79-94	2.3	51
9	Energy-adjusted pseudopotentials for the rare earth elements. *Theoretica Chimica Acta*, **1989**, 75, 173-194		971
8	Energy-adjusted ab initio pseudopotentials for the rare earth elements. *Journal of Chemical Physics*, **1989**, 90, 1730-1734	3.9	817
7	Pseudopotentials for main group elements (IIIa through VIIa). *Molecular Physics*, **1988**, 65, 1321-1328	1.7	368

6	Energy-adjusted ab initio pseudopotentials for the first row transition elements. *Journal of Chemical Physics*, **1987**, 86, 866-872	3.9	2632
5	Pseudopotential calculations for alkaline-earth atoms. *Journal of Physics B: Atomic and Molecular Physics*, **1985**, 18, 1287-1296		196
4	Cu and Ag as one-valence-electron atoms: CI results and quadrupole corrections for Cu2, Ag2, CuH, and AgH. *Journal of Chemical Physics*, **1984**, 81, 2732-2736	3.9	97
3	On the reliability of semi-empirical pseudopotentials: simulation of Hartree-Fock and Dirac-Fock results. *Journal of Physics B: Atomic and Molecular Physics*, **1983**, 16, L323-L328		147
2	A proper account of core-polarization with pseudopotentials: single valence-electron alkali compounds. *Chemical Physics Letters*, **1982**, 89, 418-422	2.5	768
1	Pseudopotential calculations on Rb+2, Cs+2, RbH+, CsH+ and the mixed alkali dimer ions. *Chemical Physics Letters*, **1982**, 93, 555-559	2.5	212