Minori Abe

List of Publications by Year in descending order

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68 papers	1,594 citations	257450 24 h-index	315739 38 g-index
70 all docs	70 docs citations	70 times ranked	1241 citing authors

#	Article	IF	Citations
1	Accurate relativistic Gaussian basis sets for H through Lr determined by atomic self-consistent field calculations with the third-order Douglasâ€“Kroll approximation. Journal of Chemical Physics, 2001, 115, 4463-4472.	3.0	158
2	Copper isotope fractionation between aqueous compounds relevant to low temperature geochemistry and biology. Geochimica Et Cosmochimica Acta, 2013, 110, 29-44.	3.9	140
3	An ab initio molecular orbital study of the nuclear volume effects in uranium isotope fractionations. Journal of Chemical Physics, 2008, 129, 164309.	3.0	78
4	Experimental and Theoretical Investigation of Isotope Fractionation of Zinc between Aqua, Chloro, and Macrocyclic Complexes. Journal of Physical Chemistry A, 2010, 114, 2543-2552.	2.5	70
5	Theoretical and experimental investigation of nickel isotopic fractionation in species relevant to modern and ancient oceans. Geochimica Et Cosmochimica Acta, 2011, 75, 469-482.	3.9	64
6	Test of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>m</mml:mi><mml:mi>p</mml:mi></mml:msub></mml:ma xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>m</mml:mi><mml:mi>e</mml:mi></mml:msub></mml:ma using vibrational transitions in N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub><mml:msup><mml:mrow /><mml:mo>+</mml:mo></mml:msup></mm	2.5	54
7	Application of relativistic coupled-cluster theory to the effective electric field in YbF. Physical Review A, 2014, 90, .	2.5	52
8	A four-index transformation in Dirac's four-component relativistic theory. Chemical Physics Letters, 2004, 388, 68-73.	2.6	46
9	The relativistic complete active-space second-order perturbation theory with the four-component Dirac Hamiltonian. Journal of Chemical Physics, 2006, 125, 234110.	3.0	46
10	Elimination of the Stark shift from the vibrational transition frequency of optically trapped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>174</mml:mn></mml:msup></mml:math>Yb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>6</mml:mn></mml:msup></mml:math>Li molecules. Physical Review A, 2011, 84, .	2.5	46
11	Mercury Monohalides: Suitability for Electron Electric Dipole Moment Searches. Physical Review Letters, 2015, 114, 183001.	7.8	41
12	Relativistic calculations of ground and excited states of LiYb molecule for ultracold photoassociation spectroscopy studies. Journal of Chemical Physics, 2010, 133, 124317.	3.0	36
13	Ab initiostudy of permanent electric dipole moment and radiative lifetimes of alkaline-earth-metal–Li molecules. Physical Review A, 2011, 84, .	2.5	35
14	Ab initiostudy on vibrational dipole moments of XH⁺molecular ions: X =²⁴Mg,⁴⁰Ca,⁶⁴Zn,⁸⁸Sr,¹¹⁴Cd,¹³⁸Ba,¹⁷⁴ and²⁰²Hg. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 245102.	1.5	34
15	Estimated accuracies of pure XH+(X: even isotopes of group II atoms) vibrational transition frequencies: towards the test of the variance inmp/me. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 025402.	1.5	33
16	Relativistic coupled-cluster calculation of the electron-nucleus scalar-pseudoscalar interaction constant <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>W</mml:mi><mml:mi>s</mml:mi></mml:msub></mml:m in YbF. Physical Review A, 2016, 93, .	2.5	33
17	Synthesis, Structure, and Reactivity of Lewis Base Stabilized Plumbacyclopentadienylidenes. Chemistry - A European Journal, 2013, 19, 16946-16953.	3.3	32
18	Dipole polarizability of alkali-metal (Na, K, Rb)â€“alkaline-earth-metal (Ca, Sr) polar molecules: Prospects for alignment. Journal of Chemical Physics, 2014, 140, 224303.	3.0	32

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19	Sensitivity of vibrational spectroscopy of optically trapped SrLi and CaLi molecules to variations inm_p/m_e. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 025001.	1.5	31
20	An ab initio study based on a finite nucleus model for isotope fractionation in the U(III)â€“U(IV) exchange reaction system. Journal of Chemical Physics, 2008, 128, 144309.	3.0	30
21	Ligand effect on uranium isotope fractionations caused by nuclear volume effects: An ab initio relativistic molecular orbital study. Journal of Chemical Physics, 2010, 133, 044309.	3.0	30
22	Enhanced sensitivity of the electron electric dipole moment from YbOH: The role of theory. Physical Review A, 2019, 99, .	2.5	30
23	Application of the finite-field coupled-cluster method to calculate molecular properties relevant to electron electric-dipole-moment searches. Physical Review A, 2018, 97, .	2.5	28
24	Mass-Dependent and Mass-Independent Isotope Effects of Zinc in a Redox Reaction. Journal of Physical Chemistry A, 2009, 113, 12225-12232.	2.5	27
25	A theoretical study of the low-lying states of the AuSi molecule: An assignment of the excited A and D states. Journal of Chemical Physics, 2002, 117, 7960-7967.	3.0	23
26	Accuracy estimations of overtone vibrational transition frequencies of optically trapped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>174</mml:mn></mml:msup></mml:math>Yb<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>6</mml:mn></mml:msup></mml:math>Li molecules. Physical Review A, 2012, 85, .	2.5	20
27	Electronic structures of PtCu, PtAg, and PtAu molecules: a Dirac four-component relativistic study. Chemical Physics, 2005, 311, 129-137.	1.9	19
28	Ab initio study of ground and excited states of 6Li40Ca and 6Li88Sr molecules. Journal of Chemical Physics, 2013, 138, 194307.	3.0	19
29	Factors influencing the photoelectrochemical device performance sensitized by ruthenium polypyridyl dyes. Dalton Transactions, 2019, 48, 688-695.	3.3	18
30	Characterizing of variation in the proton-to-electron mass ratio via precise measurements of molecular vibrational transition frequencies. Journal of Molecular Spectroscopy, 2014, 300, 99-107.	1.2	17
31	Ab initio study on potential energy curves of electronic ground and excited states of 40CaH+ molecule. Chemical Physics Letters, 2012, 521, 31-35.	2.6	16
32	Nuclear field shift effect in isotope fractionation of thallium. Journal of Radioanalytical and Nuclear Chemistry, 2013, 296, 261-265.	1.5	16
33	Enhancement factors of parity- and time-reversal-violating effects for monofluorides. Physical Review A, 2018, 98, .	2.5	16
34	RaH as a potential candidate for electron electric-dipole-moment searches. Physical Review A, 2019, 99, .	2.5	16
35	Inverted Sandwich Rh Complex Bearing a Plumbole Ligand and Its Catalytic Activity. Organometallics, 2019, 38, 3099-3103.	2.3	15
36	Magnetic-field effects in transitions ofXLi molecules (X: even isotopes of group II atoms). Physical Review A, 2011, 84, .	2.5	14

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37	Merits of heavy-heavy diatomic molecules for electron electric-dipole-moment searches. Physical Review A, 2019, 99, .	2.5	14
38	Permanent electric dipole moments of alkaline-earth-metal monofluorides: Interplay of relativistic and correlation effects. Physical Review A, 2016, 93, .	2.5	13
39	Permanent electric dipole moment of strontium monofluoride as a test of the accuracy of a relativistic coupled-cluster method. Physical Review A, 2014, 90, .	2.5	12
40	Analysis of large effective electric fields of weakly polar molecules for electron electric-dipole-moment searches. Physical Review A, 2017, 95, .	2.5	12
41	Relativistic Multireference Perturbation Theory: Complete Active-Space Second-Order Perturbation Theory (CASPT2) With The Four-Component Dirac Hamiltonian. Challenges and Advances in Computational Chemistry and Physics, 2008, , 157-177.	0.6	11
42	Ultracold mercuryâ€“alkali-metal molecules for electron-electric-dipole-moment searches. Physical Review A, 2019, 99, .	2.5	11
43	Frequency uncertainty estimation for the40CaH+vibrational transition frequencies observed by Raman excitation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 185401.	1.5	10
44	Quantumâ€chemical analyses of aromaticity, UV spectra, and NMR chemical shifts in plumbacyclopentadienylidenes stabilized by Lewis bases. Journal of Computational Chemistry, 2014, 35, 847-853.	3.3	8
45	Anab initiostudy of nuclear volume effects for isotope fractionations using two-component relativistic methods. Journal of Computational Chemistry, 2015, 36, 816-820.	3.3	8
46	Accurate ab initio calculations of spectroscopic constants and properties of BeLi+. Journal of Molecular Spectroscopy, 2018, 349, 1-9.	1.2	7
47	Electron correlation trends in the permanent electric dipole moments of alkaline-earth-metal monohydrides. Physical Review A, 2018, 98, .	2.5	7
48	Calculations of electronic properties and vibrational parameters of alkaline-earth lithides: MgLi+ and CaLi+. Molecular Physics, 2019, 117, 712-725.	1.7	7
49	Density Functional Study of Metal-to-Ligand Charge Transfer and Hole-Hopping in Ruthenium(II) Complexes with Alkyl-Substituted Bipyridine Ligands. ACS Omega, 2021, 6, 55-64.	3.5	7
50	Heavy Element Effects in the Diagonal Bornâ€“Oppenheimer Correction within a Relativistic Spin-Free Hamiltonian. Journal of Physical Chemistry A, 2016, 120, 2150-2159.	2.5	6
51	Study of HgOH to Assess Its Suitability for Electron Electric Dipole Moment Searches. Atoms, 2021, 9, 7.	1.6	6
52	Ab initio and steady-state models for uranium isotope fractionation in multi-step biotic and abiotic reduction. Geochimica Et Cosmochimica Acta, 2021, 307, 212-227.	3.9	5
53	Theoretical Study of Isotope Enrichment Caused by Nuclear Volume Effect. Journal of Computer Chemistry Japan, 2014, 13, 92-104.	0.1	5
54	Theoretical analysis of effective electric fields in mercury monohalides. Physical Review A, 2017, 95, .	2.5	4

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55	¹³C and ²⁰⁷Pb NMR Chemical Shifts of Dirhodio- and Dilithioplumbole Complexes: A Quantum Chemical Assessment. Inorganic Chemistry, 2019, 58, 14708-14719.	4.0	4
56	Significance of Non-Linear Terms in the Relativistic Coupled-Cluster Theory in the Determination of Molecular Properties. Symmetry, 2020, 12, 811.	2.2	4
57	Accurate determination of the enhancement factor X for the nuclear Schiff moment in ²⁰⁵TlF molecule based on the four-component relativistic coupled-cluster theory. Molecular Physics, 2020, 118, e1767814.	1.7	4
58	Relativistic coupled-cluster study of diatomic metal-alkali-metal molecules for electron electric dipole moment searches. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 015102.	1.5	3
59	Density Functional Study on Compounds to Accelerate the Electron Capture Decay of ⁷Be. Journal of Physical Chemistry A, 2021, 125, 6356-6361.	2.5	3
60	Proposed detection of variation inmp/meusing a vibrational transition frequency of a CaH+ion Estimated accuracies of pure XH+(X: even isotopes of group II atoms) vibrational transition frequencies: towards the test of the variance inmp/me. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 209802.	1.5	2
61	Relativistic Many-Body Aspects of the Electron Electric Dipole Moment Searches Using Molecules. , 2017, , 581-609.		1
62	Attainable accuracies of QH+ rotational transition frequencies (Q: 40Ca, 24Mg, 202Hg). Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 085401.	1.5	1
63	Diagonal Born-Oppenheimer Correction Based on Spin-Free Relativistic Hamiltonians. Journal of Computer Chemistry Japan, 2014, 13, 229-232.	0.1	1
64	Contribution of relativistic quantum chemistry to electronâ€™s electric dipole moment for CP violation. AIP Conference Proceedings, 2015, , .	0.4	0
65	Relativistic Many-Body Aspects of the Electron Electric Dipole Moment Searches Using Molecules. , 2015, , 1-26.		0
66	Theoretical Study of Formulation of Hyperfine Coupling Constant in Four-component Relativistic Framework. Journal of Computer Chemistry Japan, 2017, 16, 81-82.	0.1	0
67	The Role of Relativistic Many-Body Theory in Electron Electric Dipole Moment Searches Using Cold Molecules. Atoms, 2019, 7, 58.	1.6	0
68	Spectroscopic Studies of $${^1}mathrm {varSigma }^+$$ 1 Îź + States of HfH $$^+$$ + and PtH $$^+$$ + Molecular Ions. Springer Proceedings in Physics, 2019, , 191-198.	0.2	0