J Arjan Berger

List of Publications by Year
in descending order

46	1,248	394421 19	361022 35
papers	citations	h-index	g-index

47	47	47	1067
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ultranonlocality in Time-Dependent Current-Density-Functional Theory: Application to Conjugated Polymers. Physical Review Letters, 2002, 88, 186401.	7.8	215
2	Application of time-dependent current-density-functional theory to nonlocal exchange-correlation effects in polymers. Journal of Chemical Physics, 2003, 118, 1044-1053.	3.0	104
3	Double excitations in finite systems. Journal of Chemical Physics, 2009, 130, 044108.	3.0	96
4	Ab initiocalculations of electronic excitations: Collapsing spectral sums. Physical Review B, 2010, 82, .	3.2	81
5	Current density functional theory for optical spectra: A polarization functional. Journal of Chemical Physics, 2001, 115, 1995-1999.	3.0	74
6	Efficient<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:mrow></mml:math>calculations for SnO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>, ZnO, and rubrene: The effective-energy technique. Physical Review B, 2012, 85, .	3.2	56
7	Unphysical and physical solutions in many-body theories: from weak to strong correlation. New Journal of Physics, 2015, 17, 093045.	2.9	49
8	Green Functions and Self-Consistency: Insights From the Spherium Model. Journal of Chemical Theory and Computation, 2018, 14, 3071-3082.	5.3	35
9	Unphysical Discontinuities in GW Methods. Journal of Chemical Theory and Computation, 2018, 14, 5220-5228.	5.3	34
10	Self-consistent Dyson equation and self-energy functionals: An analysis and illustration on the example of the Hubbard atom. Physical Review B, 2017, 96, .	3.2	33
11	Fully Parameter-Free Calculation of Optical Spectra for Insulators, Semiconductors, and Metals from a Simple Polarization Functional. Physical Review Letters, 2015, 115, 137402.	7.8	32
12	Size-scaling of the polarizability of tubular fullerenes investigated with time-dependent (current)-density-functional theory. Chemical Physics Letters, 2004, 395, 274-278.	2.6	30
13	Revisiting the origin of satellites in core-level photoemission of transparent conducting oxides: The case of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SnO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2018, 97, .	3.2	30
14	Analysis of the Vignale-Kohn current functional in the calculation of the optical spectra of semiconductors. Physical Review B, 2007, 75, .	3.2	29
15	Reduced density-matrix functional theory: Correlation and spectroscopy. Journal of Chemical Physics, 2015, 143, 024108.	3.0	24
16	Optical properties of periodic systems within the current-current response framework: Pitfalls and remedies. Physical Review B, 2017, 95, .	3.2	22
17	Performance of the Vignale-Kohn functional in the linear response of metals. Physical Review B, 2006, 74, .	3.2	21
18	Photoemission spectra from reduced density matrices: The band gap in strongly correlated systems. Physical Review B, 2016, 94, .	3.2	20

#	Article	IF	Citations
19	Signatures of Wigner localization in one-dimensional systems. Journal of Chemical Physics, 2018, 148, 124103.	3.0	20
20	Analysis of the viscoelastic coefficients in the Vignale-Kohn functional: The cases of one- and three-dimensional polyacetylene. Physical Review B, 2005, 71, .	3.2	19
21	Solution to the many-body problem in one point. New Journal of Physics, 2014, 16, 113025.	2.9	18
22	A simple position operator for periodic systems. Physical Review B, 2019, 99, .	3.2	18
23	Accurate optical spectra of solids from pure time-dependent density functional theory. Physical Review B, 2020, 101, .	3.2	16
24	Potential Energy Surfaces without Unphysical Discontinuities: The Coulomb Hole Plus Screened Exchange Approach. Journal of Chemical Theory and Computation, 2021, 17, 191-200.	5.3	14
25	A physical model for the longitudinal polarizabilities of polymer chains. Journal of Chemical Physics, 2005, 123, 174910.	3.0	12
26	Gauge-Invariant Calculation of Static and Dynamical Magnetic Properties from the Current Density. Physical Review Letters, 2015, 114, 066404.	7.8	12
27	Clifford Boundary Conditions: A Simple Direct-Sum Evaluation of Madelung Constants. Journal of Physical Chemistry Letters, 2020, 11, 7090-7095.	4.6	11
28	A Wigner molecule at extremely low densities: a numerically exact study. , 2019, 1, .		11
29	Introducing screening in one-body density matrix functionals: Impact on charged excitations of model systems via the extended Koopmans' theorem. Physical Review B, 2022, 105, .	3.2	11
30	Accurate ground-state energies of Wigner crystals from a simple real-space approach. Physical Review B, 2021, 103, .	3.2	10
31	Gauge-Invariant Formulation of Circular Dichroism. Journal of Chemical Theory and Computation, 2016, 12, 3278-3283.	5.3	9
32	Clifford boundary conditions for periodic systems: the Madelung constant of cubic crystals in 1, 2 and 3 dimensions. Theoretical Chemistry Accounts, 2021, 140, 1.	1.4	9
33	Many-body perturbation theory and non-perturbative approaches: screened interaction as the key ingredient. Journal of Physics Condensed Matter, 2018, 30, 135602.	1.8	8
34	Optical spectra of 2D monolayers from time-dependent density functional theory. Faraday Discussions, 2020, 224, 467-482.	3.2	8
35	Many-Body Effective Energy Theory: Photoemission at Strong Correlation. Journal of Chemical Theory and Computation, 2019, 15, 5080-5086.	5.3	7
36	Photoemission spectrum in paramagnetic FeO under pressure: Towards an ab initio description. Physical Review Research, 2021, 3, .	3.6	7

#	Article	IF	Citations
37	Wigner localization in two and three dimensions: An ab initio approach. Journal of Chemical Physics, 2021, 155, 124114.	3.0	7
38	Efficient calculation of the polarizability: a simplified effective-energy technique. European Physical Journal B, 2012, 85, 1.	1.5	6
39	Distributed Gaussian orbitals for the description of electrons in an external potential. Journal of Molecular Modeling, 2018, 24, 216.	1.8	6
40	Photoemission spectral functions from the three-body Green's function. SciPost Physics, 2022, 12, .	4.9	6
41	Unique one-body position operator for periodic systems. Physical Review B, 2022, 105, .	3.2	6
42	The localization spread and polarizability of rings and periodic chains. Journal of Chemical Physics, 2021, 155, 124107.	3.0	4
43	Photoemission Spectra from the Extended Koopmanâ€™s Theorem, Revisited. Frontiers in Chemistry, 2021, 9, 746735.	3.6	4
44	Optical properties from time-dependent current-density-functional theory: the case of the alkali metals Na, K, Rb, and Cs. European Physical Journal B, 2018, 91, 1.	1.5	2
45	A rational reduction of CI expansions: combining localized molecular orbitals and selected charge excitations. Journal of Molecular Modeling, 2014, 20, 2240.	1.8	1
46	A diagonalizationâ€free optimization algorithm for solving <scp>Kohnâ€“Sham</scp> equations of <scp>closedâ€shell</scp> molecules. Journal of Computational Chemistry, 2021, 42, 492-504.	3.3	0