

Aron J Cohen

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

59
papers

15,574
citations

35
h-index

60
g-index

60
ext. papers

17,544
ext. citations

6
avg, IF

6.76
L-index

#	Paper	IF	Citations
59	Revealing noncovalent interactions. <i>Journal of the American Chemical Society</i> , 2010 , 132, 6498-506	16.4	4471
58	Insights into current limitations of density functional theory. <i>Science</i> , 2008 , 321, 792-4	33.3	1749
57	Challenges for density functional theory. <i>Chemical Reviews</i> , 2012 , 112, 289-320	68.1	1521
56	Left-right correlation energy. <i>Molecular Physics</i> , 2001 , 99, 403-412	1.7	1346
55	Development and assessment of new exchange-correlation functionals. <i>Journal of Chemical Physics</i> , 1998 , 109, 6264-6271	3.9	1257
54	Localization and delocalization errors in density functional theory and implications for band-gap prediction. <i>Physical Review Letters</i> , 2008 , 100, 146401	7.4	859
53	Many-electron self-interaction error in approximate density functionals. <i>Journal of Chemical Physics</i> , 2006 , 125, 201102	3.9	547
52	Assessment of a new local exchange functional OPTX. <i>Chemical Physics Letters</i> , 2001 , 341, 319-328	2.5	424
51	Fractional charge perspective on the band gap in density-functional theory. <i>Physical Review B</i> , 2008 , 77,	3.3	415
50	Dynamic correlation. <i>Molecular Physics</i> , 2001 , 99, 607-615	1.7	354
49	Development of exchange-correlation functionals with minimal many-electron self-interaction error. <i>Journal of Chemical Physics</i> , 2007 , 126, 191109	3.9	268
48	Fractional spins and static correlation error in density functional theory. <i>Journal of Chemical Physics</i> , 2008 , 129, 121104	3.9	183
47	Discontinuous nature of the exchange-correlation functional in strongly correlated systems. <i>Physical Review Letters</i> , 2009 , 102, 066403	7.4	178
46	Self-interaction-free exchange-correlation functional for thermochemistry and kinetics. <i>Journal of Chemical Physics</i> , 2006 , 124, 91102	3.9	168
45	Improving band gap prediction in density functional theory from molecules to solids. <i>Physical Review Letters</i> , 2011 , 107, 026403	7.4	139
44	Delocalization errors in density functionals and implications for main-group thermochemistry. <i>Journal of Chemical Physics</i> , 2008 , 129, 204112	3.9	139
43	Derivative discontinuity, bandgap and lowest unoccupied molecular orbital in density functional theory. <i>Journal of Chemical Physics</i> , 2012 , 136, 204111	3.9	129

42	Influence of Coulomb-attenuation on exchange-correlation functional quality. <i>Physical Chemistry Chemical Physics</i> , 2006 , 8, 4543-9	3.6	124
41	Assessment of exchange correlation functionals. <i>Chemical Physics Letters</i> , 2000 , 316, 160-166	2.5	94
40	Density functional calculations, using Slater basis sets, with exact exchange. <i>Journal of Chemical Physics</i> , 2003 , 119, 6475-6481	3.9	87
39	Evaluation of in density functional theory. <i>Journal of Chemical Physics</i> , 2007 , 126, 214104	3.9	83
38	The derivative discontinuity of the exchange-correlation functional. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 14378-87	3.6	61
37	Local scaling correction for reducing delocalization error in density functional approximations. <i>Physical Review Letters</i> , 2015 , 114, 053001	7.4	59
36	Second-Order Perturbation Theory with Fractional Charges and Fractional Spins. <i>Journal of Chemical Theory and Computation</i> , 2009 , 5, 786-92	6.4	57
35	Ab initio quantum mechanical/molecular mechanical simulation of electron transfer process: fractional electron approach. <i>Journal of Chemical Physics</i> , 2008 , 128, 124510	3.9	57
34	Analytical evaluation of Fukui functions and real-space linear response function. <i>Journal of Chemical Physics</i> , 2012 , 136, 144110	3.9	53
33	Assessment and formal properties of exchange-correlation functionals constructed from the adiabatic connection. <i>Journal of Chemical Physics</i> , 2007 , 127, 034101	3.9	52
32	Thomas-Fermi-Dirac-Weizsäcker models in finite systems. <i>Journal of Chemical Physics</i> , 2001 , 114, 631	3.9	50
31	Failure of the random-phase-approximation correlation energy. <i>Physical Review A</i> , 2012 , 85,	2.6	49
30	A dynamical correlation functional. <i>Journal of Chemical Physics</i> , 2002 , 116, 5411-5418	3.9	47
29	Molecular electric properties: an assessment of recently developed functionals. <i>Chemical Physics Letters</i> , 1999 , 299, 465-472	2.5	47
28	Optimized effective potentials from electron densities in finite basis sets. <i>Journal of Chemical Physics</i> , 2007 , 127, 174101	3.9	46
27	Density functional calculations of the hyperpolarisabilities of small molecules. <i>Chemical Physics Letters</i> , 1999 , 303, 391-398	2.5	45
26	Pushing the frontiers of density functionals by solving the fractional electron problem. <i>Science</i> , 2021 , 374, 1385-1389	33.3	40
25	On the accuracy of density functional theory and wave function methods for calculating vertical ionization energies. <i>Journal of Chemical Physics</i> , 2015 , 142, 194114	3.9	35

24	A pseudobond parametrization for improved electrostatics in quantum mechanical/molecular mechanical simulations of enzymes. <i>Journal of Chemical Physics</i> , 2008 , 129, 154106	3.9	30
23	Extension of many-body theory and approximate density functionals to fractional charges and fractional spins. <i>Journal of Chemical Physics</i> , 2013 , 139, 104114	3.9	26
22	Density-functional generalized-gradient and hybrid calculations of electromagnetic properties using Slater basis sets. <i>Journal of Chemical Physics</i> , 2004 , 120, 7252-61	3.9	25
21	Calculation of nuclear magnetic resonance shielding constants using potential-based methods. <i>Chemical Physics Letters</i> , 2004 , 399, 84-88	2.5	24
20	Similarity transformation of the electronic Schrödinger equation via Jastrow factorization. <i>Journal of Chemical Physics</i> , 2019 , 151, 061101	3.9	22
19	Dramatic changes in electronic structure revealed by fractionally charged nuclei. <i>Journal of Chemical Physics</i> , 2014 , 140, 044110	3.9	22
18	Transition metal NMR chemical shifts from optimized effective potentials. <i>Journal of Chemical Physics</i> , 2007 , 126, 074101	3.9	21
17	Excitation energies from time-dependent density functional theory with accurate exchange-correlation potentials. <i>Molecular Physics</i> , 2005 , 103, 711-717	1.7	19
16	Left-light and dynamic correlation. <i>International Journal of Quantum Chemistry</i> , 2002 , 89, 86-93	2.1	19
15	Landscape of an exact energy functional. <i>Physical Review A</i> , 2016 , 93,	2.6	17
14	Density functional generalized gradient calculations using Slater basis sets. <i>Journal of Chemical Physics</i> , 2002 , 117, 1470-1478	3.9	17
13	Hartree-Fock orbitals which obey the nuclear cusp condition. <i>Chemical Physics Letters</i> , 2005 , 404, 156-163.	2.5	14
12	Fractional numbers of electrons in Kohn-Sham theory. <i>Chemical Physics Letters</i> , 2003 , 382, 203-210	2.5	13
11	Fermionic Statistics in the Strongly Correlated Limit of Density Functional Theory. <i>Journal of Chemical Theory and Computation</i> , 2017 , 13, 6089-6100	6.4	12
10	Analytic energy gradients of the optimized effective potential method. <i>Journal of Chemical Physics</i> , 2005 , 123, 134111	3.9	12
9	Are Hartree-Fock atoms too small or too large?. <i>Physical Chemistry Chemical Physics</i> , 2004 , 6, 2928-2931	3.6	9
8	Exact Density Functional Obtained via the Levy Constrained Search. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 4910-4914	6.4	8
7	Qualitative breakdown of the unrestricted Hartree-Fock energy. <i>Journal of Chemical Physics</i> , 2014 , 141, 164124	3.9	8

6	Size extensivity of the direct optimized effective potential method. <i>Journal of Chemical Physics</i> , 2008 , 128, 114702	3.9	5
5	Constructing a map from the electron density to the exchange-correlation potential. <i>Physical Chemistry Chemical Physics</i> , 2002 , 4, 4612-4618	3.6	5
4	Binding curve of the beryllium dimer using similarity-transformed FCIQMC: Spectroscopic accuracy with triple-zeta basis sets. <i>Journal of Chemical Physics</i> , 2021 , 155, 011102	3.9	4
3	Insight and progress in density functional theory 2012 ,		3
2	Transcorrelated coupled cluster methods. <i>Journal of Chemical Physics</i> , 2021 , 155, 191101	3.9	3
1	Optimized effective potential for calculations with orbital-free potential functionals. <i>Molecular Physics</i> , 2012 , 110, 925-934	1.7	2