Aron J Cohen

List of Publications by Year in Descending Order

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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	Pushing the frontiers of density functionals by solving the fractional electron problem. *Science*, **2021**, 374, 1385-1389	33.3	40
58	Transcorrelated coupled cluster methods. *Journal of Chemical Physics*, **2021**, 155, 191101	3.9	3
57	Binding curve of the beryllium dimer using similarity-transformed FCIQMC: Spectroscopic accuracy with triple-zeta basis sets. *Journal of Chemical Physics*, **2021**, 155, 011102	3.9	4
56	Similarity transformation of the electronic Schrödinger equation via Jastrow factorization. *Journal of Chemical Physics*, **2019**, 151, 061101	3.9	22
55	Exact Density Functional Obtained via the Levy Constrained Search. *Journal of Physical Chemistry Letters*, **2018**, 9, 4910-4914	6.4	8
54	Fermionic Statistics in the Strongly Correlated Limit of Density Functional Theory. *Journal of Chemical Theory and Computation*, **2017**, 13, 6089-6100	6.4	12
53	Landscape of an exact energy functional. *Physical Review A*, **2016**, 93,	2.6	17
52	On the accuracy of density functional theory and wave function methods for calculating vertical ionization energies. *Journal of Chemical Physics*, **2015**, 142, 194114	3.9	35
51	Local scaling correction for reducing delocalization error in density functional approximations. *Physical Review Letters*, **2015**, 114, 053001	7.4	59
50	Dramatic changes in electronic structure revealed by fractionally charged nuclei. *Journal of Chemical Physics*, **2014**, 140, 044110	3.9	22
49	Qualitative breakdown of the unrestricted Hartree-Fock energy. *Journal of Chemical Physics*, **2014**, 141, 164124	3.9	8
48	The derivative discontinuity of the exchange-correlation functional. *Physical Chemistry Chemical Physics*, **2014**, 16, 14378-87	3.6	61
47	Extension of many-body theory and approximate density functionals to fractional charges and fractional spins. *Journal of Chemical Physics*, **2013**, 139, 104114	3.9	26
46	Analytical evaluation of Fukui functions and real-space linear response function. *Journal of Chemical Physics*, **2012**, 136, 144110	3.9	53
45	Derivative discontinuity, bandgap and lowest unoccupied molecular orbital in density functional theory. *Journal of Chemical Physics*, **2012**, 136, 204111	3.9	129
44	Challenges for density functional theory. *Chemical Reviews*, **2012**, 112, 289-320	68.1	1521
43	Failure of the random-phase-approximation correlation energy. *Physical Review A*, **2012**, 85,	2.6	49

42	Optimized effective potential for calculations with orbital-free potential functionals. *Molecular Physics*, **2012**, 110, 925-934	1.7	2
41	Insight and progress in density functional theory **2012**,		3
40	Improving band gap prediction in density functional theory from molecules to solids. *Physical Review Letters*, **2011**, 107, 026403	7.4	139
39	Revealing noncovalent interactions. *Journal of the American Chemical Society*, **2010**, 132, 6498-506	16.4	4471
38	Discontinuous nature of the exchange-correlation functional in strongly correlated systems. *Physical Review Letters*, **2009**, 102, 066403	7.4	178
37	Second-Order Perturbation Theory with Fractional Charges and Fractional Spins. *Journal of Chemical Theory and Computation*, **2009**, 5, 786-92	6.4	57
36	Ab initio quantum mechanical/molecular mechanical simulation of electron transfer process: fractional electron approach. *Journal of Chemical Physics*, **2008**, 128, 124510	3.9	57
35	Localization and delocalization errors in density functional theory and implications for band-gap prediction. *Physical Review Letters*, **2008**, 100, 146401	7.4	859
34	Fractional charge perspective on the band gap in density-functional theory. *Physical Review B*, **2008**, 77,	3.3	415
33	Insights into current limitations of density functional theory. *Science*, **2008**, 321, 792-4	33.3	1749
32	Delocalization errors in density functionals and implications for main-group thermochemistry. *Journal of Chemical Physics*, **2008**, 129, 204112	3.9	139
31	Fractional spins and static correlation error in density functional theory. *Journal of Chemical Physics*, **2008**, 129, 121104	3.9	183
30	Size extensivity of the direct optimized effective potential method. *Journal of Chemical Physics*, **2008**, 128, 114702	3.9	5
29	A pseudobond parametrization for improved electrostatics in quantum mechanical/molecular mechanical simulations of enzymes. *Journal of Chemical Physics*, **2008**, 129, 154106	3.9	30
28	Development of exchange-correlation functionals with minimal many-electron self-interaction error. *Journal of Chemical Physics*, **2007**, 126, 191109	3.9	268
27	Transition metal NMR chemical shifts from optimized effective potentials. *Journal of Chemical Physics*, **2007**, 126, 074101	3.9	21
26	Assessment and formal properties of exchange-correlation functionals constructed from the adiabatic connection. *Journal of Chemical Physics*, **2007**, 127, 034101	3.9	52
25	Evaluation of in density functional theory. *Journal of Chemical Physics*, **2007**, 126, 214104	3.9	83

24	Optimized effective potentials from electron densities in finite basis sets. *Journal of Chemical Physics*, **2007**, 127, 174101	3.9	46
23	Influence of Coulomb-attenuation on exchange-correlation functional quality. *Physical Chemistry Chemical Physics*, **2006**, 8, 4543-9	3.6	124
22	Many-electron self-interaction error in approximate density functionals. *Journal of Chemical Physics* , **2006**, 125, 201102	3.9	547
21	Self-interaction-free exchange-correlation functional for thermochemistry and kinetics. *Journal of Chemical Physics*, **2006**, 124, 91102	3.9	168
20	Excitation energies from time-dependent density functional theory with accurate exchange-correlation potentials. *Molecular Physics*, **2005**, 103, 711-717	1.7	19
19	Hartree–Fock orbitals which obey the nuclear cusp condition. *Chemical Physics Letters*, **2005**, 404, 156-163	2.5	14
18	Analytic energy gradients of the optimized effective potential method. *Journal of Chemical Physics*, **2005**, 123, 134111	3.9	12
17	Calculation of nuclear magnetic resonance shielding constants using potential-based methods. *Chemical Physics Letters*, **2004**, 399, 84-88	2.5	24
16	Are Hartree–Fock atoms too small or too large?. *Physical Chemistry Chemical Physics*, **2004**, 6, 2928-2931	3.6	9
15	Density-functional generalized-gradient and hybrid calculations of electromagnetic properties using Slater basis sets. *Journal of Chemical Physics*, **2004**, 120, 7252-61	3.9	25
14	Fractional numbers of electrons in Kohn–Sham theory. *Chemical Physics Letters*, **2003**, 382, 203-210	2.5	13
13	Density functional calculations, using Slater basis sets, with exact exchange. *Journal of Chemical Physics*, **2003**, 119, 6475-6481	3.9	87
12	Left–right and dynamic correlation. *International Journal of Quantum Chemistry*, **2002**, 89, 86-93	2.1	19
11	A dynamical correlation functional. *Journal of Chemical Physics*, **2002**, 116, 5411-5418	3.9	47
10	Density functional generalized gradient calculations using Slater basis sets. *Journal of Chemical Physics*, **2002**, 117, 1470-1478	3.9	17
9	Constructing a map from the electron density to the exchange–correlation potential. *Physical Chemistry Chemical Physics*, **2002**, 4, 4612-4618	3.6	5
8	Assessment of a new local exchange functional OPTX. *Chemical Physics Letters*, **2001**, 341, 319-328	2.5	424
7	Thomas–Fermi–Dirac–von Weizsa cker models in finite systems. *Journal of Chemical Physics*, **2001**, 114, 631	3.9	50

6	Left-right correlation energy. *Molecular Physics*, **2001**, 99, 403-412	1.7	1346
5	Dynamic correlation. *Molecular Physics*, **2001**, 99, 607-615	1.7	354
4	Assessment of exchange correlation functionals. *Chemical Physics Letters*, **2000**, 316, 160-166	2.5	94
3	Density functional calculations of the hyperpolarisabilities of small molecules. *Chemical Physics Letters*, **1999**, 303, 391-398	2.5	45
2	Molecular electric properties: an assessment of recently developed functionals. *Chemical Physics Letters*, **1999**, 299, 465-472	2.5	47
1	Development and assessment of new exchange-correlation functionals. *Journal of Chemical Physics*, **1998**, 109, 6264-6271	3.9	1257