Jianmin Tao

List of Publications by Year in Descending Order

55 papers	9,514 citations	25 h-index	58 g-index
58 ext. papers	10,421 ext. citations	3.7 avg, IF	6.04 L-index

#	Paper	IF	Citations
55	Density functionals combined with van der Waals corrections for graphene adsorbed on layered materials. *Physical Review B*, **2020**, 101,	3.3	4
54	Long-range dispersion-corrected density functional for noncovalent interactions. *International Journal of Modern Physics B*, **2019**, 33, 1950300	1.1	3
53	van der Waals Correction to the Physisorption of Graphene on Metal Surfaces. *Journal of Physical Chemistry C*, **2019**, 123, 13748-13757	3.8	13
52	First-principles study of the binding energy between nanostructures and its scaling with system size. *Physical Review B*, **2018**, 97,	3.3	12
51	Modeling the physisorption of graphene on metals. *Physical Review B*, **2018**, 97,	3.3	13
50	Origin of the size-dependence of the equilibrium van der Waals binding between nanostructures. *Journal of Chemical Physics*, **2018**, 148, 074110	3.9	5
49	Comparative study of the properties of ionic solids from density functionals. *Materials Research Express*, **2018**, 5, 076302	1.7	7
48	Visualizing atomic sizes and molecular shapes with the classical turning surface of the Kohn-Sham potential. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E11578-E11585	11.5	22
47	Accurate lattice geometrical parameters and bulk moduli from a semilocal density functional. *AIP Advances*, **2018**, 8, 095209	1.5	10
46	Assessment of the Tao-Mo nonempirical semilocal density functional in applications to solids and surfaces. *Physical Review B*, **2017**, 95,	3.3	32
45	Accurate excitation energies of molecules and oligomers from a semilocal density functional. *Journal of Chemical Physics*, **2017**, 146, 234102	3.9	9
44	Comparative study of semilocal density functionals on solids and surfaces. *Chemical Physics Letters*, **2017**, 682, 38-42	2.5	12
43	Frequency-dependent dielectric function of semiconductors with application to physisorption. *Physical Review B*, **2017**, 95,	3.3	18
42	Semilocal exchange hole with an application to range-separated density functionals. *Physical Review B*, **2017**, 95,	3.3	18
41	Exchange-correlation energies of atoms from efficient density functionals: influence of the electron density. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2017**, 50, 245004	1.3	
40	Performance of a nonempirical exchange functional from density matrix expansion: comparative study with different correlations. *Physical Chemistry Chemical Physics*, **2017**, 19, 21707-21713	3.6	17
39	Geometric Derivation of the Stress Tensor of the Homogeneous Electron Gas. *Computation*, **2017**, 5, 28	2.2	1

38	Energetic Study of Clusters and Reaction Barrier Heights from Efficient Semilocal Density Functionals. *Computation*, **2017**, 5, 27	2.2	7
37	Screened van der Waals correction to density functional theory for solids. *Physical Review Materials*, **2017**, 1,	3.2	18
36	Accurate van der Waals coefficients between fullerenes and fullerene-alkali atoms and clusters: Modified single-frequency approximation. *Physical Review B*, **2016**, 94,	3.3	11
35	Communication: Accurate higher-order van der Waals coefficients between molecules from a model dynamic multipole polarizability. *Journal of Chemical Physics*, **2016**, 144, 031102	3.9	17
34	Performance of a nonempirical density functional on molecules and hydrogen-bonded complexes. *Journal of Chemical Physics*, **2016**, 145, 234306	3.9	23
33	Accurate Semilocal Density Functional for Condensed-Matter Physics and Quantum Chemistry. *Physical Review Letters*, **2016**, 117, 073001	7.4	100
32	Van der Waals coefficients beyond the classical shell model. *Journal of Chemical Physics*, **2015**, 142, 024312	3.9	8
31	Dynamical screening of van der Waals interactions in nanostructured solids: Sublimation of fullerenes. *Journal of Chemical Physics*, **2015**, 142, 164302	3.9	14
30	Quantum pressure and chemical bonding: Influence of magnetic fields on electron localization. *Physical Review B*, **2015**, 92,	3.3	7
29	Physical adsorption: theory of van der Waals interactions between particles and clean surfaces. *Physical Review Letters*, **2014**, 112, 106101	7.4	44
28	Communication: Non-additivity of van der Waals interactions between nanostructures. *Journal of Chemical Physics*, **2014**, 141, 141101	3.9	23
27	LONG-RANGE VAN DER WAALS INTERACTION. *International Journal of Modern Physics B*, **2013**, 27, 1330011	1.1	14
26	Performance of meta-GGA Functionals on General Main Group Thermochemistry, Kinetics, and Noncovalent Interactions. *Journal of Chemical Theory and Computation*, **2013**, 9, 355-63	6.4	62
25	Ice phases under ambient and high pressure: Insights from density functional theory. *Physical Review B*, **2013**, 87,	3.3	26
24	Spherical-shell model for the van der Waals coefficients between fullerenes and/or nearly spherical nanoclusters. *Journal of Physics Condensed Matter*, **2012**, 24, 424207	1.8	12
23	Van der waals coefficients for nanostructures: fullerenes defy conventional wisdom. *Physical Review Letters*, **2012**, 109, 233203	7.4	62
22	Accurate van der Waals coefficients from density functional theory. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 18-21	11.5	61
21	Long-range van der Waals attraction and alkali-metal lattice constants. *Physical Review B*, **2010**, 81,	3.3	61

20	Exact-exchange energy density in the gauge of a semilocal density-functional approximation. *Physical Review A*, **2008**, 77,	2.6	85
19	Performance of a nonempirical meta-generalized gradient approximation density functional for excitation energies. *Journal of Chemical Physics*, **2008**, 128, 084110	3.9	30
18	Density functional with full exact exchange, balanced nonlocality of correlation, and constraint satisfaction. *Physical Review A*, **2008**, 78,	2.6	187
17	One-parameter optimization of a nonempirical meta-generalized-gradient-approximation for the exchange-correlation energy. *Physical Review A*, **2007**, 76,	2.6	37
16	Uniform Density Limit of Exchange-Correlation Energy Functionals. *ACS Symposium Series*, **2007**, 13-25	0.4	5
15	Meta-generalized gradient approximation for the exchange-correlation hole with an application to the jellium surface energy. *Physical Review B*, **2006**, 73,	3.3	64
14	Test of a nonempirical density functional: short-range part of the van der Waals interaction in rare-gas dimers. *Journal of Chemical Physics*, **2005**, 122, 114102	3.9	99
13	Prescription for the design and selection of density functional approximations: more constraint satisfaction with fewer fits. *Journal of Chemical Physics*, **2005**, 123, 62201	3.9	658
12	Energies of organic molecules and atoms in density functional theory. *International Journal of Quantum Chemistry*, **2005**, 101, 506-511	2.1	62
11	Nonempirical construction of current-density functionals from conventional density-functional approximations. *Physical Review Letters*, **2005**, 95, 196403	7.4	56
10	Meta-generalized gradient approximation: explanation of a realistic nonempirical density functional. *Journal of Chemical Physics*, **2004**, 120, 6898-911	3.9	355
9	Tests of a ladder of density functionals for bulk solids and surfaces. *Physical Review B*, **2004**, 69,	3.3	313
8	Climbing the density functional ladder: nonempirical meta-generalized gradient approximation designed for molecules and solids. *Physical Review Letters*, **2003**, 91, 146401	7.4	4737
7	Comparative assessment of a new nonempirical density functional: Molecules and hydrogen-bonded complexes. *Journal of Chemical Physics*, **2003**, 119, 12129-12137	3.9	1724
6	Properties of the exchange hole under an appropriate coordinate transformation. *Journal of Chemical Physics*, **2003**, 119, 6457-6464	3.9	24
5	An accurate MGGA-based hybrid exchange-correlation functional. *Journal of Chemical Physics*, **2002**, 116, 2335-2337	3.9	18
4	CORRELATION ENERGY DENSITIES: E PLURIBUS UNUM **2002**, 719-730		1
3	Uniform electron gas from the Colle-Salvetti functional: Missing long-range correlations. *Physical Review A*, **2001**, 63,	2.6	31

2	Exchange energy density of an atom as a functional of the electron density. *Journal of Chemical Physics*, **2001**, 115, 3519-3530	3.9	26
1	How correlation suppresses density fluctuations in the uniform electron gas of one, two, or three dimensions. *International Journal of Quantum Chemistry*, **2000**, 77, 819-830	2.1	37