Matthias Degroote

List of Publications by Year
in descending order

19 papers	1,657 citations	759233 12 h-index	839539 18 g-index
22 all docs	22 docs citations	22 times ranked	1107 citing authors

#	Article	IF	Citations
1	Quantum Chemistry in the Age of Quantum Computing. Chemical Reviews, 2019, 119, 10856-10915.	47.7	748
2	Noisy intermediate-scale quantum algorithms. Reviews of Modern Physics, 2022, 94, .	45.6	521
3	A quantum computing view on unitary coupled cluster theory. Chemical Society Reviews, 2022, 51, 1659-1684.	38.1	83
4	Transfer matrices and excitations with matrix product states. New Journal of Physics, 2015, 17, 053002.	2.9	58
5	Polynomial similarity transformation theory: A smooth interpolation between coupled cluster doubles and projected BCS applied to the reduced BCS Hamiltonian. Physical Review B, 2016, 93, .	3.2	53
6	TEQUILA: a platform for rapid development of quantum algorithms. Quantum Science and Technology, 2021, 6, 024009.	5.8	36
7	Merging symmetry projection methods with coupled cluster theory: Lessons from the Lipkin model Hamiltonian. Journal of Chemical Physics, 2017, 146, 054110.	3.0	30
8	Mutual information-assisted adaptive variational quantum eigensolver. Quantum Science and Technology, 2021, 6, 035001.	5.8	26
9	Faddeev random-phase approximation for molecules. Physical Review A, 2011, 83, .	2.5	16
10	Natural evolutionary strategies for variational quantum computation. Machine Learning: Science and Technology, 2021, 2, 045012.	5.0	16
11	Towards the simulation of large scale protein–ligand interactions on NISQ-era quantum computers. Chemical Science, 2022, 13, 3094-3108.	7.4	16
12	Extended random phase approximation method for atomic excitation energies from correlated and variationally optimized second-order density matrices. Computational and Theoretical Chemistry, 2013, 1003, 50-54.	2.5	15
13	An artificial spiking quantum neuron. Npj Quantum Information, 2021, 7, .	6.7	12
14	Noise Robustness and Experimental Demonstration of a Quantum Generative Adversarial Network for Continuous Distributions. Advanced Quantum Technologies, 2021, 4, 2000069.	3.9	8
15	Accuracy of the Faddeev random phase approximation for light atoms. Physical Review A, 2012, 85, .	2.5	7
16	A molecular computing approach to solving optimization problems via programmable microdroplet arrays. Matter, 2021, 4, 1107-1124.	10.0	7
17	Spin polynomial similarity transformation for repulsive Hamiltonians: interpolating between coupled cluster and spin-projected unrestricted Hartree–Fock. Physical Chemistry Chemical Physics, 2017, 19, 22385-22394.	2.8	4
18	Faddeev Random Phase Approximation for molecules. Computer Physics Communications, 2011, 182, 1995-1998.	7.5	1

#	Article	IF	Citations
19	Faddeev random phase approximation applied to molecules. European Physical Journal: Special Topics, 2013, 218, 1-70.	2.6	0