Michael Lesiuk

List of Publications by Year
in descending order

38 papers	756 citations	516710 16 h-index	552781 26 g-index
40 all docs	40 docs citations	40 times ranked	656 citing authors

#	Article	IF	Citations
1	Symphony on strong field approximation. Reports on Progress in Physics, 2019, 82, 116001.	20.1	123
2	Exploring Chemical Space with the Alchemical Derivatives. Journal of Chemical Theory and Computation, 2013, 9, 5327-5340.	5.3	42
3	Second virial coefficients for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>4</mml:mn></mml:mmultiscripts></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math> from an accurate relativistic potential. Physical Review A, 2020, 102, .	2.5	41
4	Solidâ€State Conversion of the Solvated Dimer [{tBuZn(Î¼â€OtBu)(thf)}₂] into a Long Overlooked Trimeric [{tBuZnOtBu}₃] Species. Angewandte Chemie - International Edition, 2010, 49, 8266-8269.	13.8	38
5	Crossover between few and many fermions in a harmonic trap. Physical Review A, 2015, 92, .	2.5	37
6	Many interacting fermions in a one-dimensional harmonic trap: a quantum-chemical treatment. New Journal of Physics, 2015, 17, 115001.	2.9	35
7	QED calculation of the dipole polarizability of helium atom. Physical Review A, 2020, 101, .	2.5	34
8	Higher order alchemical derivatives from coupled perturbed self-consistent field theory. Journal of Chemical Physics, 2012, 136, 034104.	3.0	31
9	Exploring Chemical Space with Alchemical Derivatives: BN-Simultaneous Substitution Patterns in C₆₀. Journal of Chemical Theory and Computation, 2018, 14, 1154-1168.	5.3	31
10	Reexamination of the calculation of two-center, two-electron integrals over Slater-type orbitals. I. Coulomb and hybrid integrals. Physical Review E, 2014, 90, 063318.	2.1	28
11	Complete Basis Set Extrapolation of Electronic Correlation Energies Using the Riemann Zeta Function. Journal of Chemical Theory and Computation, 2019, 15, 5398-5403.	5.3	28
12	Reexamination of the calculation of two-center, two-electron integrals over Slater-type orbitals. III. Case study of the beryllium dimer. Physical Review A, 2015, 91, .	2.5	27
13	Ab initio Potential Energy Curve for the Ground State of Beryllium Dimer. Journal of Chemical Theory and Computation, 2019, 15, 2470-2480.	5.3	25
14	Implementation of the Coupled-Cluster Method with Single, Double, and Triple Excitations using Tensor Decompositions. Journal of Chemical Theory and Computation, 2020, 16, 453-467.	5.3	23
15	Reexamination of the calculation of two-center, two-electron integrals over Slater-type orbitals. II. Neumann expansion of the exchange integrals. Physical Review E, 2014, 90, 063319.	2.1	20
16	Exploring chemical space with alchemical derivatives: alchemical transformations of H through Ar and their ions as a proof of concept. Physical Chemistry Chemical Physics, 2019, 21, 23865-23879.	2.8	19
17	Reactions of ZnR₂ Compounds with Dibenzoyl: Characterisation of the Alkylâ€Transfer Products and a Striking Productâ€Inhibition Effect. Chemistry - A European Journal, 2011, 17, 12713-12721.	3.3	17
18	Analytical two-center integrals over Slater geminal functions. Physical Review A, 2012, 86, .	2.5	14

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19	Theoretical determination of polarizability and magnetic susceptibility of neon. Physical Review A, 2020, 102, .	2.5	13
20	A systematic construction of Gaussian basis sets for the description of laser field ionization and high-harmonic generation. Journal of Chemical Physics, 2021, 154, 094111.	3.0	12
21	Calculation of Araki-Sucher correction for many-electron systems. Physical Review A, 2017, 96, .	2.5	10
22	Explicitly Correlated Electronic Structure Calculations with Transcorrelated Matrix Product Operators. Journal of Chemical Theory and Computation, 2022, 18, 4203-4217.	5.3	9
23	Combining Slater-type orbitals and effective core potentials. Physical Review A, 2017, 95, .	2.5	8
24	Quintic-scaling rank-reduced coupled cluster theory with single and double excitations. Journal of Chemical Physics, 2022, 156, 064103.	3.0	8
25	Calculation of STOs electron repulsion integrals by ellipsoidal expansion and large-order approximations. Journal of Mathematical Chemistry, 2016, 54, 572-591.	1.5	7
26	Efficient singularâ€valuedecomposition of the coupledâ€cluster triple excitation amplitudes. Journal of Computational Chemistry, 2019, 40, 1319-1332.	3.3	7
27	Analysis of QED and non-adiabaticity effects on the rovibrational spectrum of H3+ using geometry-dependent effective nuclear masses. Journal of Chemical Physics, 2020, 152, 104109.	3.0	7
28	A first-principles-based correlation functional for harmonious connection of short-range correlation and long-range dispersion. Journal of Chemical Physics, 2012, 137, 204121.	3.0	6
29	Calculation of the molecular integrals with the range-separated correlation factor. Journal of Chemical Physics, 2015, 142, 124102.	3.0	6
30	Molecular electrostatic potential at the atomic sites in the effective core potential approximation. Journal of Chemical Physics, 2013, 138, 074107.	3.0	5
31	Transition moments between excited electronic states from the Hermitian formulation of the coupled cluster quadratic response function. Journal of Chemical Physics, 2017, 146, 034108.	3.0	5
32	Potential-energy curve for the a3Î£u+ state of a lithium dimer with Slater-type orbitals. Physical Review A, 2020, 102, .	2.5	5
33	A straightforward a posteriori method for reduction of density-fitting error in coupled-cluster calculations. Journal of Chemical Physics, 2020, 152, 044104.	3.0	5
34	On the large interelectronic distance behavior of the correlation factor for explicitly correlated wave functions. Journal of Chemical Physics, 2013, 139, 134102.	3.0	4
35	Size consistency and counterpoise correction in explicitly correlated calculations of interaction energies and interaction-induced properties. Physical Review A, 2019, 99, .	2.5	4
36	Near-Exact CCSDT Energetics from Rank-Reduced Formalism Supplemented by Non-iterative Corrections. Journal of Chemical Theory and Computation, 2021, , .	5.3	4

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37	Correlation energies for many-electron atoms with explicitly correlated Slater functions. Physical Review A, 2018, 98, .	2.5	3
38	Spinâ€“orbit coupling matrix elements from the explicitly connected expressions of the response functions within the coupled-cluster theory. Molecular Physics, 0, , .	1.7	0