James E Avery

List of Publications by Year
in descending order

29	505	1040056 9	713466 21
papers	citations	h-index	g-index

34	34	34	429
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The topology of fullerenes. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2015, 5, 96-145.	14.6	159
2	Program Fullerene: A software package for constructing and analyzing structures of regular fullerenes. Journal of Computational Chemistry, 2013, 34, 1508-1526.	3.3	82
3	The Generalized Sturmian Method for Calculating Spectra of Atoms and Ions. Journal of Mathematical Chemistry, 2003, 33, 145-162.	1.5	22
4	Coulomb Sturmians as a basis for molecular calculations. Molecular Physics, 2012, 110, 1593-1608.	1.7	14
5	Quantum chemistry with Coulomb Sturmians: Construction and convergence of Coulomb Sturmian basis sets at the Hartree-Fock level. Physical Review A, 2019, 99, .	2.5	13
6	Generalized Sturmian Solutions for Many-Particle SchrÃ¶dinger Equationsâ€. Journal of Physical Chemistry A, 2004, 108, 8848-8851.	2.5	12
7	Fusion of Parallel Array Operations. , 2016, , .		11
8	Naming polyhedra by general face-spirals â€“ Theory and applications to fullerenes and other polyhedral molecules. Fullerenes Nanotubes and Carbon Nanostructures, 2018, 26, 607-630.	2.1	10
9	Toward quantum-chemical method development for arbitrary basis functions. Journal of Chemical Physics, 2018, 149, 084106.	3.0	10
10	Natural Orbitals from Generalized Sturmian Calculations. Advances in Quantum Chemistry, 2003, 43, 207-216.	0.8	9
11	Can Coulomb Sturmians Be Used as a Basis for N-Electron Molecular Calculations?. Journal of Physical Chemistry A, 2009, 113, 14565-14572.	2.5	9
12	Structure and Properties of the Nonface-Spiral Fullerenes T-C₃₈₀, D₃-C₃₈₄, D₃-C₄₄₀, and D₃-C₆₇₂ and Their Halma and Leapfrog Transforms. Journal of Chemical Information and Modeling, 2014, 54, 121-130.	5.4	9
13	Molecular Integrals for Exponential-Type Orbitals Using Hyperspherical Harmonics. Advances in Quantum Chemistry, 2015, , 265-324.	0.8	9
14	Fast Electron Repulsion Integrals for Molecular Coulomb Sturmians. Advances in Quantum Chemistry, 2013, , 129-151.	0.8	8
15	Molecular integrals for slater type orbitals using coulomb sturmians. Journal of Mathematical Chemistry, 2014, 52, 301-312.	1.5	8
16	Kramers Pairs in Configuration Interaction. Advances in Quantum Chemistry, 2003, 43, 185-206.	0.8	7
17	4-Center STO Interelectron Repulsion Integrals With Coulomb Sturmians. Advances in Quantum Chemistry, 2018, , 133-146.	0.8	6
18	Atomic core-ionization energies; approximately piecewise-linear and linear relationships. Journal of Mathematical Chemistry, 2009, 46, 164-181.	1.5	4

#	Article	IF	Citations
19	Atomic Densities, Polarizabilities, and Natural Orbitals Derived from Generalized Sturmian Calculations. Advances in Quantum Chemistry, 2004, 47, 157-176.	0.8	3
20	Rapid evaluation of molecular integrals with ETOs. International Journal of Quantum Chemistry, 2015, 115, 930-936.	2.0	3
21	Wave equations without coordinates I: fullerenes. Rendiconti Lincei, 2018, 29, 609-621.	2.2	3
22	Battling Memory Requirements of Array Programming Through Streaming. Lecture Notes in Computer Science, 2016, , 451-469.	1.3	3
23	Autoionizing States of Atoms Calculated Using Generalized Sturmians. Advances in Quantum Chemistry, 2005, , 103-119.	0.8	2
24	The Generalized Sturmian Method. , 2011, , 111-139.		2
25	Calculating the number of Hamilton cycles in layered polyhedral graphs. Computational and Mathematical Methods, 2021, 3, e1142.	0.8	2
26	A chainlike relative coordinate system for few-particle problems. Journal of Mathematical Chemistry, 2017, 55, 584-597.	1.5	1
27	Static Complexity Analysis of Higher Order Programs. Lecture Notes in Computer Science, 2010, , 84-99.	1.3	1
28	Array streaming for array programming. International Journal of Computational Science and Engineering, 2018, 17, 263.	0.5	0
29	Simulating fullerene polyhedral formation from planar precursors. Physical Chemistry Chemical Physics, 2021, 23, 6561-6573.	2.8	0