Juan Carlos Angulo

List of Publications by Year
in descending order

86	1,709	257101 24	329751 37
papers	citations	h-index	g-index

92	92	92	426
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fisherâ€“Shannon plane and statistical complexity of atoms. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 670-674.	0.9	110
2	Fisher-Shannon analysis of ionization processes and isoelectronic series. Physical Review A, 2007, 76, .	1.0	77
3	Atomic complexity measures in position and momentum spaces. Journal of Chemical Physics, 2008, 128, 164109.	1.2	77
4	Analysis of complexity measures and information planes of selected molecules in position and momentum spaces. Physical Chemistry Chemical Physics, 2010, 12, 7108.	1.3	67
5	Fisher Information and Steric Effect: Study of the Internal Rotation Barrier of Ethane. Journal of Physical Chemistry A, 2011, 115, 4406-4415.	1.1	64
6	Tight rigorous bounds to atomic information entropies. Journal of Chemical Physics, 1992, 97, 6485-6495.	1.2	63
7	Fisher Information Study in Position and Momentum Spaces for Elementary Chemical Reactions. Journal of Chemical Theory and Computation, 2010, 6, 145-154.	2.3	60
8	Fisher and Jensenâ€“Shannon divergences: Quantitative comparisons among distributions. Application to position and momentum atomic densities. Journal of Chemical Physics, 2009, 130, 074110.	1.2	49
9	Information entropy and uncertainty inD-dimensional many-body systems. Physical Review A, 1994, 50, 311-313.	1.0	47
10	Phenomenological description of the transition state, and the bond breaking and bond forming processes of selected elementary chemical reactions: an information-theoretic study. Theoretical Chemistry Accounts, 2009, 124, 445-460.	0.5	45
11	Rigorous properties and uncertainty-like relationships on product-complexity measures: Application to atomic systems. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 2081-2091.	1.2	44
12	Entropy and complexity analysis of Dirac-delta-like quantum potentials. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 2215-2228.	1.2	40
13	Complexity analysis of ionization processes and isoelectronic series. International Journal of Quantum Chemistry, 2009, 109, 586-593.	1.0	38
14	Maximum-entropy technique with logarithmic constraints: Estimation of atomic radial densities. European Physical Journal D, 1999, 7, 479-485.	0.6	36
15	Atomic systems with a completely monotonic electron density. Physical Review A, 1991, 44, 1516-1522.	1.0	34
16	Atomic quantum similarity indices in position and momentum spaces. Journal of Chemical Physics, 2007, 126, 044106.	1.2	33
17	Uncertainty relationships in many-body systems. Journal of Physics A, 1993, 26, 6493-6497.	1.6	32
18	Atomic-charge convexity and the electron density at the nucleus. Physical Review A, 1990, 42, 641-644.	1.0	29

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19	Bounds to the central electron-pair density with applications to two-electron atoms. Physical Review A, 1993, 47, 5202-5205.	1.0	29
20	Fisher entropy and uncertaintylike relationships in many-body systems. Physical Review A, 1999, 59, 4064-4067.	1.0	29
21	Renyi complexities and information planes: Atomic structure in conjugated spaces. Chemical Physics Letters, 2009, 474, 233-237.	1.2	28
22	The Hausdorff entropic moment problem. Journal of Mathematical Physics, 2001, 42, 2309.	0.5	25
23	Inverse atomic densities and inequalities among density functionals. Journal of Mathematical Physics, 2000, 41, 7906-7917.	0.5	24
24	Quantum entanglement and the dissociation process of diatomic molecules. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 175101.	0.6	24
25	Phenomenological description of selected elementary chemical reaction mechanisms: An information-theoretic study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 948-951.	0.9	23
26	A generalized complexity measure based on RÃ©nyi entropy. European Physical Journal D, 2014, 68, 1.	0.6	23
27	Divergence analysis of atomic ionization processes and isoelectronic series. Physical Review A, 2009, 80, .	1.0	22
28	Information-theoretical complexity for the hydrogenic abstraction reaction. Molecular Physics, 2011, 109, 2353-2365.	0.8	22
29	Improved lower bounds for the atomic charge density at the nucleus. Journal of Physics B: Atomic, Molecular and Optical Physics, 1988, 21, L271-L274.	0.6	21
30	Existence conditions and spreading properties of extreme entropy D-dimensional distributions. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 2243-2255.	1.2	20
31	Electronâ€pair entropic and complexity measures in atomic systems. International Journal of Quantum Chemistry, 2019, 119, e25861.	1.0	20
32	Quantum similarity indices for atomic ionization processes. European Physical Journal D, 2008, 46, 21-26.	0.6	17
33	Phenomenological Description of a Three-Center Insertion Reaction: An Information-Theoretic Study. Journal of Physical Chemistry A, 2010, 114, 1906-1916.	1.1	17
34	Maximum-entropy analysis of the electron-pair density in many-electron systems. Physical Review A, 1994, 50, 240-246.	1.0	16
35	Concurrent phenomena at the transition region of selected elementary chemical reactions: An informationâ€theoretical complexity analysis. International Journal of Quantum Chemistry, 2012, 112, 3578-3586.	1.0	16
36	Information entropies of many-electron systems. International Journal of Quantum Chemistry, 1995, 56, 489-498.	1.0	15

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37	Jensenâ€“Tsallis divergence and atomic dissimilarity for position and momentum space electron densities. Journal of Chemical Physics, 2010, 132, 044105.	1.2	15
38	Information-theoretic space from simple atomic and molecular systems to biological and pharmacological molecules. Theoretical Chemistry Accounts, 2016, 135, 1.	0.5	15
39	Upper and lower bounds on the radial electron density in atoms. Physical Review A, 1993, 48, 4149-4155.	1.0	14
40	Jensenâ€“Shannon and Kullbackâ€“Leibler divergences as quantifiers of relativistic effects in neutral atoms. Chemical Physics Letters, 2015, 635, 75-79.	1.2	14
41	Minimum-cross-entropy estimation of atomic charge densities from scattering factors. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 577-586.	0.6	13
42	Jensenâ€“Shannon divergence in conjugate spaces: The entropy excess of atomic systems and sets with respect to their constituents. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 899-907.	1.2	13
43	Validity of the extended electron-electron cusp condition. Physical Review A, 1994, 50, 297-304.	1.0	12
44	Insight into the informational-structure behavior of the Diels-Alder reaction of cyclopentadiene and maleic anhydride. Journal of Molecular Modeling, 2014, 20, 2361.	0.8	12
45	Nonconvexity of the atomic charge density and shell structure. Physical Review A, 1994, 49, 726-728.	1.0	11
46	Monotonicity properties of the atomic charge density function. International Journal of Quantum Chemistry, 1996, 58, 11-21.	1.0	11
47	On the non-convexity of charge densities in atoms and ions. Computational and Theoretical Chemistry, 2000, 501-502, 177-182.	1.5	11
48	A generalized relative complexity: Application to atomic one-particle densities. Chemical Physics Letters, 2012, 539-540, 191-196.	1.2	11
49	Atomic-charge log-convexity and radial expectation values. Journal of Physics B: Atomic, Molecular and Optical Physics, 1991, 24, L299-L306.	0.6	10
50	Bounds to some local electron-pair properties with application to two-electron ions. Physical Review A, 1994, 50, 857-860.	1.0	10
51	Information-theoretical complexity for the hydrogenic identity S N 2 exchange reaction. Journal of Mathematical Chemistry, 2012, 50, 1882-1900.	0.7	10
52	Generalized Quantum Similarity Index: Applications in atoms. Chemical Physics Letters, 2011, 506, 326-331.	1.2	9
53	Generalized position-momentum uncertainty products: Inclusion of moments with negative order and application to atoms. Physical Review A, 2011, 83, .	1.0	9
54	Relativistic global and local divergences in hydrogenic systems: A study in position and momentum spaces. Physical Review A, 2014, 90, .	1.0	9

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55	Spreading measures of information-extremizer distributions: applications to atomic electron densities in position and momentum spaces. European Physical Journal D, 2009, 51, 321-329.	0.6	8
56	Generalized Jensen divergence analysis of atomic electron densities in conjugated spaces. International Journal of Quantum Chemistry, 2011, 111, 297-306.	1.0	8
57	Jensenâ€“Tsallis divergence and atomic dissimilarity for ionized systems in conjugated spaces. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 769-780.	1.2	8
58	Concurrent Phenomena at the Reaction Path of the SN2 Reaction CH3Cl + Fâ^'. Information Planes and Statistical Complexity Analysis. Entropy, 2013, 15, 4084-4104.	1.1	8
59	Maximum-entropy analysis of one-particle densities in atoms. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1996, 37, 295-299.	1.0	7
60	Maximum-entropy analysis of momentum densities in diatomic molecules. International Journal of Quantum Chemistry, 1997, 61, 77-83.	1.0	7
61	Information-theoretical analysis for the S_N 2 exchange reaction CH₃ Cl + F^{â^'}. International Journal of Quantum Chemistry, 2013, 113, 2589-2599.	1.0	7
62	A study of the atomic momentum density by means of radial expectation values. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 4663-4669.	0.6	6
63	Uncertainty inequalities among frequency moments and radial expectation values: Applications to atomic systems. Journal of Mathematical Physics, 2012, 53, 043512.	0.5	6
64	Mutual Information in Conjugate Spaces for Neutral Atoms and Ions. Entropy, 2022, 24, 233.	1.1	6
65	Electron-pair logarithmic convexity and interelectronic moments in atoms: Application to heliumlike ions. Physical Review A, 1993, 48, 2457-2460.	1.0	5
66	Reciprocal form factors from momentum density magnitudes. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 5629-5635.	0.6	5
67	Theoretic-information entropies analysis of nanostructures:ab initiostudy of PAMAM precursors and dendrimers G0 to G3. Molecular Simulation, 2009, 35, 498-511.	0.9	5
68	Geometric RÃ©nyi divergence: A comparative measure with applications to atomic densities. Physical Review A, 2011, 84, .	1.0	5
69	Generalized quantum similarity in atomic systems: A quantifier of relativistic effects. Physica A: Statistical Mechanics and Its Applications, 2017, 467, 315-325.	1.2	5
70	Rigorous bounds to the atomic ionization potential. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, L431-L435.	0.6	4
71	Maximum-entropy analysis of atomic compton profiles. International Journal of Quantum Chemistry, 1995, 56, 747-752.	1.0	4
72	Tight approximations to total scattering intensities from electron-pair density quantities. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 230, 324-329.	0.9	4

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73	Reconstruction of atomic effective potentials from isotropic scattering factors. Physical Review A, 2002, 65, .	1.0	4
74	Fisher-like atomic divergences: Mathematical grounds and physical applications. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 5552-5563.	1.2	4
75	Momentum unimodality effects in atomic systems. Physical Review A, 1993, 48, 4768-4770.	1.0	3
76	Interelectronic moments of atomic systems. Physical Review A, 1993, 48, 832-835.	1.0	3
77	Minimum-cross-entropy estimation of electron-pair densities from scattering intensities. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 260, 247-252.	0.9	3
78	Analysis of correlation and ionization from pair distributions in many-electron systems. European Physical Journal Plus, 2021, 136, 1.	1.2	3
79	Minimum cross-entropy estimation of internally folded densities from Compton profiles. International Journal of Quantum Chemistry, 2002, 87, 214-219.	1.0	2
80	Structural properties of reciprocal form factor in neutral atoms and singly charged ions. Journal of Chemical Physics, 2004, 120, 7369-7373.	1.2	2
81	Effect of the interelectronic repulsion on the information content of position and momentum atomic densities. International Journal of Quantum Chemistry, 2010, 110, 1738-1747.	1.0	2
82	Maximum-entropy and PadÃ©-like approximations to atomic scattering factors. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1997, 41, 175-179.	1.0	1
83	Upper bounds to atomic electron densities in position and momentum spaces. Journal of Mathematical Chemistry, 2000, 28, 341-351.	0.7	1
84	Bare Coulomb field and atomic reciprocal form factor. International Journal of Quantum Chemistry, 2006, 106, 485-489.	1.0	1
85	An application of information theory to stochastic classical gravitational fields. Physica A: Statistical Mechanics and Its Applications, 2018, 499, 129-141.	1.2	1
86	Information Planes and Complexity Measures for Atomic Systems, Ionization Processes and Isoelectronic Series. Progress in Theoretical Chemistry and Physics, 2009, , 417-434.	0.2	0