

Juan Carlos Angulo

List of Publications by Year in descending order

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86
papers

1,709
citations

257101

24
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329751

37
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92
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docs citations

92
times ranked

426
citing authors

#	ARTICLE	IF	CITATIONS
1	Mutual Information in Conjugate Spaces for Neutral Atoms and Ions. <i>Entropy</i> , 2022, 24, 233.	1.1	6
2	Analysis of correlation and ionization from pair distributions in many-electron systems. <i>European Physical Journal Plus</i> , 2021, 136, 1.	1.2	3
3	Electron pair entropic and complexity measures in atomic systems. <i>International Journal of Quantum Chemistry</i> , 2019, 119, e25861.	1.0	20
4	An application of information theory to stochastic classical gravitational fields. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 499, 129-141.	1.2	1
5	Generalized quantum similarity in atomic systems: A quantifier of relativistic effects. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2017, 467, 315-325.	1.2	5
6	Information-theoretic space from simple atomic and molecular systems to biological and pharmacological molecules. <i>Theoretical Chemistry Accounts</i> , 2016, 135, 1.	0.5	15
7	Jensen-Shannon and Kullback-Leibler divergences as quantifiers of relativistic effects in neutral atoms. <i>Chemical Physics Letters</i> , 2015, 635, 75-79.	1.2	14
8	Relativistic global and local divergences in hydrogenic systems: A study in position and momentum spaces. <i>Physical Review A</i> , 2014, 90, .	1.0	9
9	Insight into the informational-structure behavior of the Diels-Alder reaction of cyclopentadiene and maleic anhydride. <i>Journal of Molecular Modeling</i> , 2014, 20, 2361.	0.8	12
10	A generalized complexity measure based on Rényi entropy. <i>European Physical Journal D</i> , 2014, 68, 1.	0.6	23
11	Fisher-like atomic divergences: Mathematical grounds and physical applications. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013, 392, 5552-5563.	1.2	4
12	Information-theoretical analysis for the S_N2 exchange reaction $CH_3 + Cl + F^{\sim}$. <i>International Journal of Quantum Chemistry</i> , 2013, 113, 2589-2599.	1.0	7
13	Concurrent Phenomena at the Reaction Path of the S_N2 Reaction $CH_3Cl + F^{\sim}$. <i>Information Planes and Statistical Complexity Analysis. Entropy</i> , 2013, 15, 4084-4104.	1.1	8
14	Uncertainty inequalities among frequency moments and radial expectation values: Applications to atomic systems. <i>Journal of Mathematical Physics</i> , 2012, 53, 043512.	0.5	6
15	A generalized relative complexity: Application to atomic one-particle densities. <i>Chemical Physics Letters</i> , 2012, 539-540, 191-196.	1.2	11
16	Concurrent phenomena at the transition region of selected elementary chemical reactions: An information-theoretical complexity analysis. <i>International Journal of Quantum Chemistry</i> , 2012, 112, 3578-3586.	1.0	16
17	Information-theoretical complexity for the hydrogenic identity S_N2 exchange reaction. <i>Journal of Mathematical Chemistry</i> , 2012, 50, 1882-1900.	0.7	10
18	Quantum entanglement and the dissociation process of diatomic molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 175101.	0.6	24

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19	Information-theoretical complexity for the hydrogenic abstraction reaction. <i>Molecular Physics</i> , 2011, 109, 2353-2365.	0.8	22
20	Fisher Information and Steric Effect: Study of the Internal Rotation Barrier of Ethane. <i>Journal of Physical Chemistry A</i> , 2011, 115, 4406-4415.	1.1	64
21	Generalized Jensen divergence analysis of atomic electron densities in conjugated spaces. <i>International Journal of Quantum Chemistry</i> , 2011, 111, 297-306.	1.0	8
22	Generalized Quantum Similarity Index: Applications in atoms. <i>Chemical Physics Letters</i> , 2011, 506, 326-331.	1.2	9
23	Entropy and complexity analysis of Dirac-delta-like quantum potentials. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011, 390, 2215-2228.	1.2	40
24	Jensen's Tsallis divergence and atomic dissimilarity for ionized systems in conjugated spaces. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011, 390, 769-780.	1.2	8
25	Geometric Rényi divergence: A comparative measure with applications to atomic densities. <i>Physical Review A</i> , 2011, 84, .	1.0	5
26	Generalized position-momentum uncertainty products: Inclusion of moments with negative order and application to atoms. <i>Physical Review A</i> , 2011, 83, .	1.0	9
27	Jensen's Shannon divergence in conjugate spaces: The entropy excess of atomic systems and sets with respect to their constituents. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010, 389, 899-907.	1.2	13
28	Phenomenological description of selected elementary chemical reaction mechanisms: An information-theoretic study. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 948-951.	0.9	23
29	Effect of the interelectronic repulsion on the information content of position and momentum atomic densities. <i>International Journal of Quantum Chemistry</i> , 2010, 110, 1738-1747.	1.0	2
30	Jensen's Tsallis divergence and atomic dissimilarity for position and momentum space electron densities. <i>Journal of Chemical Physics</i> , 2010, 132, 044105.	1.2	15
31	Phenomenological Description of a Three-Center Insertion Reaction: An Information-Theoretic Study. <i>Journal of Physical Chemistry A</i> , 2010, 114, 1906-1916.	1.1	17
32	Fisher Information Study in Position and Momentum Spaces for Elementary Chemical Reactions. <i>Journal of Chemical Theory and Computation</i> , 2010, 6, 145-154.	2.3	60
33	Analysis of complexity measures and information planes of selected molecules in position and momentum spaces. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 7108.	1.3	67
34	Fisher and Jensen's Shannon divergences: Quantitative comparisons among distributions. Application to position and momentum atomic densities. <i>Journal of Chemical Physics</i> , 2009, 130, 074110.	1.2	49
35	Phenomenological description of the transition state, and the bond breaking and bond forming processes of selected elementary chemical reactions: an information-theoretic study. <i>Theoretical Chemistry Accounts</i> , 2009, 124, 445-460.	0.5	45
36	Complexity analysis of ionization processes and isoelectronic series. <i>International Journal of Quantum Chemistry</i> , 2009, 109, 586-593.	1.0	38

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37	Rigorous properties and uncertainty-like relationships on product-complexity measures: Application to atomic systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 2081-2091.	1.2	44
38	Renyi complexities and information planes: Atomic structure in conjugated spaces. <i>Chemical Physics Letters</i> , 2009, 474, 233-237.	1.2	28
39	Spreading measures of information-extremizer distributions: applications to atomic electron densities in position and momentum spaces. <i>European Physical Journal D</i> , 2009, 51, 321-329.	0.6	8
40	Theoretic-information entropies analysis of nanostructures: <i>ab initio</i> study of PAMAM precursors and dendrimers G0 to G3. <i>Molecular Simulation</i> , 2009, 35, 498-511.	0.9	5
41	Divergence analysis of atomic ionization processes and isoelectronic series. <i>Physical Review A</i> , 2009, 80, .	1.0	22
42	Information Planes and Complexity Measures for Atomic Systems, Ionization Processes and Isoelectronic Series. <i>Progress in Theoretical Chemistry and Physics</i> , 2009, , 417-434.	0.2	0
43	Fisher-Shannon plane and statistical complexity of atoms. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 670-674.	0.9	110
44	Existence conditions and spreading properties of extreme entropy D-dimensional distributions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 2243-2255.	1.2	20
45	Quantum similarity indices for atomic ionization processes. <i>European Physical Journal D</i> , 2008, 46, 21-26.	0.6	17
46	Atomic complexity measures in position and momentum spaces. <i>Journal of Chemical Physics</i> , 2008, 128, 164109.	1.2	77
47	Atomic quantum similarity indices in position and momentum spaces. <i>Journal of Chemical Physics</i> , 2007, 126, 044106.	1.2	33
48	Fisher-Shannon analysis of ionization processes and isoelectronic series. <i>Physical Review A</i> , 2007, 76, .	1.0	77
49	Bare Coulomb field and atomic reciprocal form factor. <i>International Journal of Quantum Chemistry</i> , 2006, 106, 485-489.	1.0	1
50	Structural properties of reciprocal form factor in neutral atoms and singly charged ions. <i>Journal of Chemical Physics</i> , 2004, 120, 7369-7373.	1.2	2
51	Reconstruction of atomic effective potentials from isotropic scattering factors. <i>Physical Review A</i> , 2002, 65, .	1.0	4
52	Minimum cross-entropy estimation of internally folded densities from Compton profiles. <i>International Journal of Quantum Chemistry</i> , 2002, 87, 214-219.	1.0	2
53	The Hausdorff entropic moment problem. <i>Journal of Mathematical Physics</i> , 2001, 42, 2309.	0.5	25
54	On the non-convexity of charge densities in atoms and ions. <i>Computational and Theoretical Chemistry</i> , 2000, 501-502, 177-182.	1.5	11

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55	Upper bounds to atomic electron densities in position and momentum spaces. <i>Journal of Mathematical Chemistry</i> , 2000, 28, 341-351.	0.7	1
56	Inverse atomic densities and inequalities among density functionals. <i>Journal of Mathematical Physics</i> , 2000, 41, 7906-7917.	0.5	24
57	Minimum-cross-entropy estimation of atomic charge densities from scattering factors. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1999, 32, 577-586.	0.6	13
58	Fisher entropy and uncertaintylike relationships in many-body systems. <i>Physical Review A</i> , 1999, 59, 4064-4067.	1.0	29
59	Minimum-cross-entropy estimation of electron-pair densities from scattering intensities. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 260, 247-252.	0.9	3
60	Maximum-entropy technique with logarithmic constraints: Estimation of atomic radial densities. <i>European Physical Journal D</i> , 1999, 7, 479-485.	0.6	36
61	Maximum-entropy and Padé-like approximations to atomic scattering factors. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1997, 41, 175-179.	1.0	1
62	Tight approximations to total scattering intensities from electron-pair density quantities. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 230, 324-329.	0.9	4
63	Maximum-entropy analysis of momentum densities in diatomic molecules. <i>International Journal of Quantum Chemistry</i> , 1997, 61, 77-83.	1.0	7
64	Maximum-entropy analysis of one-particle densities in atoms. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1996, 37, 295-299.	1.0	7
65	Monotonicity properties of the atomic charge density function. <i>International Journal of Quantum Chemistry</i> , 1996, 58, 11-21.	1.0	11
66	Reciprocal form factors from momentum density magnitudes. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1996, 29, 5629-5635.	0.6	5
67	Information entropies of many-electron systems. <i>International Journal of Quantum Chemistry</i> , 1995, 56, 489-498.	1.0	15
68	Maximum-entropy analysis of atomic Compton profiles. <i>International Journal of Quantum Chemistry</i> , 1995, 56, 747-752.	1.0	4
69	Validity of the extended electron-electron cusp condition. <i>Physical Review A</i> , 1994, 50, 297-304.	1.0	12
70	Nonconvexity of the atomic charge density and shell structure. <i>Physical Review A</i> , 1994, 49, 726-728.	1.0	11
71	Bounds to some local electron-pair properties with application to two-electron ions. <i>Physical Review A</i> , 1994, 50, 857-860.	1.0	10
72	Maximum-entropy analysis of the electron-pair density in many-electron systems. <i>Physical Review A</i> , 1994, 50, 240-246.	1.0	16

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73	Information entropy and uncertainty in D -dimensional many-body systems. <i>Physical Review A</i> , 1994, 50, 311-313.	1.0	47
74	Upper and lower bounds on the radial electron density in atoms. <i>Physical Review A</i> , 1993, 48, 4149-4155.	1.0	14
75	Rigorous bounds to the atomic ionization potential. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993, 26, L431-L435.	0.6	4
76	Uncertainty relationships in many-body systems. <i>Journal of Physics A</i> , 1993, 26, 6493-6497.	1.6	32
77	Momentum unimodality effects in atomic systems. <i>Physical Review A</i> , 1993, 48, 4768-4770.	1.0	3
78	Electron-pair logarithmic convexity and interelectronic moments in atoms: Application to heliumlike ions. <i>Physical Review A</i> , 1993, 48, 2457-2460.	1.0	5
79	Interelectronic moments of atomic systems. <i>Physical Review A</i> , 1993, 48, 832-835.	1.0	3
80	Bounds to the central electron-pair density with applications to two-electron atoms. <i>Physical Review A</i> , 1993, 47, 5202-5205.	1.0	29
81	A study of the atomic momentum density by means of radial expectation values. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993, 26, 4663-4669.	0.6	6
82	Tight rigorous bounds to atomic information entropies. <i>Journal of Chemical Physics</i> , 1992, 97, 6485-6495.	1.2	63
83	Atomic-charge log-convexity and radial expectation values. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1991, 24, L299-L306.	0.6	10
84	Atomic systems with a completely monotonic electron density. <i>Physical Review A</i> , 1991, 44, 1516-1522.	1.0	34
85	Atomic-charge convexity and the electron density at the nucleus. <i>Physical Review A</i> , 1990, 42, 641-644.	1.0	29
86	Improved lower bounds for the atomic charge density at the nucleus. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1988, 21, L271-L274.	0.6	21