Amlan Kusum Roy

List of Publications by Year
in descending order

68	1,169	331670	477307
papers	citations	21 h-index	29 g-index

69	69	69	296
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Informationâ€entropic measures in free and confined hydrogen atom. International Journal of Quantum Chemistry, 2018, 118, e25596.	2.0	59
2	Critical parameters and spherical confinement of H atom in screened Coulomb potential. International Journal of Quantum Chemistry, 2016, 116, 953-960.	2.0	42
3	The generalized pseudospectral approach to the bound states of the HulthÃ©n and the Yukawa potentials. Pramana - Journal of Physics, 2005, 65, 1-15.	1.8	38
4	Time-dependent quantum-mechanical calculation of ground and excited states of anharmonic and double-well oscillators. Physical Review A, 2001, 65, .	2.5	36
5	Density-functional calculations for doubly excited states of He, and. Journal of Physics B: Atomic, Molecular and Optical Physics, 1997, 30, 4763-4782.	1.5	35
6	Calculation of the spiked harmonic oscillators through aÂgeneralized pseudospectral method. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 321, 231-238.	2.1	35
7	Studies on the 3D confined potentials using generalized pseudospectral approach. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 357, 112-119.	2.1	34
8	Studies on some exponentialâ€screened coulomb potentials. International Journal of Quantum Chemistry, 2013, 113, 1503-1510.	2.0	34
9	Spherical confinement of coulombic systems inside an impenetrable box: H atom and the HulthÃ©n potential. International Journal of Quantum Chemistry, 2015, 115, 937-947.	2.0	33
10	Information entropic measures of a quantum harmonic oscillator in symmetric and asymmetric confinement within an impenetrable box. Annalen Der Physik, 2016, 528, 796-818.	2.4	32
11	Density-functional calculations on singly and doubly excited Rydberg states of many-electron atoms. Physical Review A, 2002, 65, .	2.5	31
12	Ro-vibrational studies of diatomic molecules in a shifted Deng-Fan oscillator potential. International Journal of Quantum Chemistry, 2014, 114, 383-391.	2.0	31
13	Information entropy and complexity measure in generalized Kratzer potential. Chemical Physics Letters, 2019, 716, 257-264.	2.6	31
14	Information entropy as a measure of tunneling and quantum confinement in a symmetric doubleâ€well potential. Annalen Der Physik, 2015, 527, 825-845.	2.4	30
15	Ro-vibrational spectroscopy of molecules represented by a Tietzâ€“Hua oscillator potential. Journal of Mathematical Chemistry, 2014, 52, 1405-1413.	1.5	29
16	Quantum confinement in an asymmetric doubleâ€well potential through energy analysis and information entropic measure. Annalen Der Physik, 2016, 528, 412-433.	2.4	28
17	Accurate ro-vibrational spectroscopy of diatomic molecules in a Morse oscillator potential. Results in Physics, 2013, 3, 103-108.	4.1	26
18	Calculation of the bound states of power-law and logarithmic potentials through a generalized pseudospectral method. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, 269-278.	3.6	25

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19	Direct calculation of ground-state electronic densities and properties of noble gas atoms through a single time-dependent hydrodynamical equation. Chemical Physics Letters, 1999, 308, 523-531.	2.6	24
20	Various complexity measures in confined hydrogen atom. Chemical Physics Letters, 2017, 687, 322-329.	2.6	24
21	Studies on some singular potentials in quantum mechanics. International Journal of Quantum Chemistry, 2005, 104, 861-870.	2.0	23
22	Studies on bound-state spectra of Manningâ€“Rosen potential. Modern Physics Letters A, 2014, 29, 1450042.	1.2	23
23	Accurate calculation of the bound states of Hellmann potential. Journal of Mathematical Chemistry, 2008, 44, 260-269.	1.5	21
24	Confinement in 3D polynomial oscillators through a generalized pseudospectral method. Modern Physics Letters A, 2014, 29, 1450104.	1.2	21
25	Fisher information in confined hydrogen-like ions. Chemical Physics Letters, 2018, 691, 449-455.	2.6	21
26	Roâ€vibrational energy and thermodynamic properties of molecules subjected to <scp>Dengâ€“Fan</scp> potential through an improved approximation. International Journal of Quantum Chemistry, 2021, 121, e26616.	2.0	21
27	Density functional calculations on triply excited states of lithium isoelectronic sequence. International Journal of Quantum Chemistry, 1997, 65, 317-332.	2.0	19
28	Studies on the hollow states of atomic lithium using a density functional approach. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 4369-4386.	1.5	19
29	Shannon Entropy in Confined He-Like Ions within a Density Functional Formalism. Quantum Reports, 2020, 2, 189-207.	1.3	19
30	Confined hydrogenlike ions in plasma environments. Physical Review A, 2021, 104, .	2.5	18
31	Information-entropic measures for non-zero l states of confined hydrogen-like ions. European Physical Journal D, 2018, 72, 1.	1.3	17
32	Ground and excited states of one-dimensional self-interacting nonlinear oscillators through time-dependent quantum mechanics. International Journal of Quantum Chemistry, 2003, 91, 597-606.	2.0	15
33	Bound state spectra of the 3D rational potential. International Journal of Quantum Chemistry, 2008, 108, 827-836.	2.0	15
34	Clusters of glycolic acid with three to six water molecules. Journal of Chemical Physics, 2005, 122, 074313.	3.0	14
35	Analytical solution of D dimensional SchrÃ¶dinger equation for Eckart potential with a new improved approximation in centrifugal term. Chemical Physics Letters, 2021, 780, 138909.	2.6	14
36	Analysis of Compton profile through information theory in H-like atoms inside impenetrable sphere. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 235002.	1.5	14

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37	Quantum fluid dynamics approach for electronic structure calculation: application to the study of ground-state properties of rare gas atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 2075-2086.	1.5	13
38	One-dimensional multiple-well oscillators: A time-dependent quantum mechanical approach. Pramana - Journal of Physics, 2002, 59, 575-583.	1.8	12
39	Density functional studies on the hollow resonances in the Li-isoelectronic sequence (Z= 4â€“10). Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 1591-1605.	1.5	12
40	Gridâ€based density functional calculations of manyâ€electron systems. International Journal of Quantum Chemistry, 2008, 108, 837-847.	2.0	12
41	Pseudopotential density functional treatment of atoms and molecules in cartesian coordinate grid. Chemical Physics Letters, 2008, 461, 142-149.	2.6	11
42	Quantum mechanical virial-like theorem for confined quantum systems. Physical Review A, 2019, 99, .	2.5	11
43	Low-lying states of two-dimensional double-well potentials. Journal of Physics A, 2005, 38, 2189-2199.	1.6	10
44	Density functional calculation of many-electron systems in Cartesian coordinate grid. Journal of Mathematical Chemistry, 2011, 49, 1687-1699.	1.5	10
45	Ro-vibrational energy analysis of Manningâ€“Rosen and PÃ¶schlâ€“Teller potentials with a new improved approximation in the centrifugal term. European Physical Journal Plus, 2021, 136, 1.	2.6	10
46	Ground and excited states of spherically symmetric potentials through an imaginary-time evolution method: application to spiked harmonic oscillators. Journal of Mathematical Chemistry, 2014, 52, 2645-2662.	1.5	9
47	Relative Fisher information in some central potentials. Annals of Physics, 2018, 398, 190-202.	2.8	9
48	Ground and excited states of Liâ^', Beâ^' through a density-based approach. Chemical Physics Letters, 2007, 445, 355-360.	2.6	8
49	Studies on the Bound-State Spectrum of Hyperbolic Potential. Few-Body Systems, 2014, 55, 143-150.	1.5	8
50	Quantum confinement in 1D systems through an imaginary-time evolution method. Modern Physics Letters A, 2015, 30, 1550176.	1.2	8
51	Informationâ€Entropic Measures in Confined Isotropic Harmonic Oscillator. Advanced Theory and Simulations, 2018, 1, 1800090.	2.8	8
52	Density functional electric response properties of molecules in Cartesian grid. International Journal of Quantum Chemistry, 2018, 118, e25708.	2.0	7
53	Shell-confined atom and plasma: Incidental degeneracy, metallic character, and information entropy. Physical Review A, 2021, 104, .	2.5	7
54	Fisher information in confined isotropic harmonic oscillator. International Journal of Quantum Chemistry, 2018, 118, e25727.	2.0	6

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55	Efficient HF exchange evaluation through Fourier convolution in Cartesian grid for orbital-dependent density functionals. Journal of Chemical Physics, 2019, 150, 064104.	3.0	6
56	Static polarizability and hyperpolarizability in atoms and molecules through a Cartesian-grid DFT. Theoretical Chemistry Accounts, 2019, 138, 1.	1.4	6
57	Confined H$$^-$$ ion within a density functional framework. European Physical Journal D, 2021, 75, 1.	1.3	6
58	Some complexity measures in confined isotropic harmonic oscillator. Journal of Mathematical Chemistry, 2019, 57, 1806-1821.	1.5	4
59	Excitation energies through Beckeâ€™s exciton model within a Cartesian-grid KS DFT. Theoretical Chemistry Accounts, 2021, 140, 1.	1.4	4
60	A dispersion-corrected density functional theory study of hexamers of formic acid. Canadian Journal of Chemistry, 2013, 91, 527-528.	1.1	3
61	Density functional study of atoms spatially confined inside a hard sphere. International Journal of Quantum Chemistry, 2021, 121, e26630.	2.0	3
62	A Simple Effective SCF Method for Computing Optical Gaps in Organic Chromophores. Chemistry - an Asian Journal, 2021, 16, 2729-2739.	3.3	3
63	A self-consistent systematic optimisation of range-separated hybrid functionals from first principles. Molecular Physics, 0, , .	1.7	3
64	Charge-Transfer Excitation within a Hybrid-(G)KS Framework through Cartesian Grid DFT. Journal of Physical Chemistry A, 2022, 126, 1448-1457.	2.5	3
65	A real-time TDDFT scheme for strong-field interaction in Cartesian coordinate grid. Chemical Physics Letters, 2022, 796, 139562.	2.6	2
66	Multipole oscillator strength and polarizability for confined hydrogen-like atoms under high pressure. Journal of Physics B: Atomic, Molecular and Optical Physics, 0, , .	1.5	2
67	Energy and information analysis for confined H atom in harmonic environment. Journal of Physics: Conference Series, 2021, 1850, 012013.	0.4	1
68	DFT calculations of atoms and molecules in Cartesian grids. Chemical Modelling, 2016, , 221-260.	0.4	1