Ranber Singh

List of Publications by Year
in descending order

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55 papers	1,304 citations	471509 17 h-index	345221 36 g-index
56 all docs	56 docs citations	56 times ranked	1636 citing authors

#	Article	IF	Citations
1	Nanowire Quantum Dots as an Ideal Source of Entangled Photon Pairs. Physical Review Letters, 2009, 103, 063601.	7.8	184
2	Tuning the Exciton Binding Energies in Single Self-Assembled<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>InGaAs</mml:mi><mml:mo>/</mml:mo><mml:mi>GaAs</mml:mi></mml:math>Quantum Dots by Piezoelectric-Induced Biaxial Stress. Physical Review Letters, 2010, 104, 067405.	7.8	160
3	A light-hole exciton in a quantum dot. Nature Physics, 2014, 10, 46-51.	16.7	111
4	Unexpected magnetism in nanomaterials. Journal of Magnetism and Magnetic Materials, 2013, 346, 58-73.	2.3	98
5	Magnetism in graphene due to single-atom defects: dependence on the concentration and packing geometry of defects. Journal of Physics Condensed Matter, 2009, 21, 196002.	1.8	96
6	Lower Bound for the Excitonic Fine Structure Splitting in Self-Assembled Quantum Dots. Physical Review Letters, 2010, 104, 196803.	7.8	88
7	Structural, electronic, and magnetic properties of 13-, 55-, and 147-atom clusters of Fe, Co, and Ni: A spin-polarized density functional study. Physical Review B, 2008, 78, .	3.2	70
8	Hydrofluorinated graphene: Two-dimensional analog of polyvinylidene fluoride. Physical Review B, 2011, 84, .	3.2	48
9	Dependence of the Redshifted and Blueshifted Photoluminescence Spectra of Single<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>In</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi>Ga</mml:mi><mml:mi><mml:mrow Dots on the Applied Uniaxial Stress. Physical Review Letters, 2011, 107, 217402.	7.8	40
10	Ultralow lattice thermal conductivity and anisotropic thermoelectric performance of AA stacked SnSe bilayer. Applied Surface Science, 2020, 512, 145640.	6.1	37
11	Controlling quantum dot emission by integration of semiconductor nanomembranes onto piezoelectric actuators. Physica Status Solidi (B): Basic Research, 2012, 249, 687-696.	1.5	36
12	Ab initio investigation of local magnetic structures around substitutional 3d transition metal impurities at cation sites in IIIâ€“V and IIâ€“VI semiconductors. Journal of Magnetism and Magnetic Materials, 2010, 322, 290-297.	2.3	26
13	Effect of temperature dependent relaxation time of charge carriers on the thermoelectric properties of LiScX (X=C, Si, Ge) half-Heusler alloys. Journal of Alloys and Compounds, 2019, 806, 1536-1541.	5.5	25
14	Sample dependence of the structural, vibrational, and electronic properties ofaâ^'Si:H:â€ƒA density-functional-based tight-binding study. Physical Review B, 2004, 70, .	3.2	20
15	Effects of atomic ordering on the electronic and optical properties of self-assembled In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Ga<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>As/GaAs semiconductor quantum dots. Physical Review B, 2011, 84, .	3.2	20
16	Structure factor of amorphous TiO2 nanoparticle; Molecular Dynamics Study. Journal of Non-Crystalline Solids, 2011, 357, 3399-3404.	3.1	19
17	Influence of the atomic-scale structure on the exciton fine-structure splitting in InGaAs and GaAs quantum dots in a vertical electric field. Physical Review B, 2012, 86, .	3.2	17
18	Nuclear quantum effects induce metallization of dense solid molecular hydrogen. Journal of Computational Chemistry, 2018, 39, 262-268.	3.3	16

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19	Anharmonicity and finite-temperature effects on the structure, stability, and vibrational spectrum of phase III of solid molecular hydrogen. Physical Review B, 2014, 90, .	3.2	15
20	Search for thermoelectricity in Li-based half-Heusler alloys: a DFT study. Materials Research Express, 2018, 5, 014009.	1.6	13
21	Spin-orbit coupling in graphene, silicene and germanene: dependence on the configuration of full hydrogenation and fluorination. Bulletin of Materials Science, 2018, 41, 1.	1.7	13
22	Enhancement in the thermoelectric performance of half-Heusler alloy LiScGe under hydrostatic pressure. Journal of Alloys and Compounds, 2020, 818, 152929.	5.5	13
23	Phonons in nanocrystalline fcc nickel. Surface Science, 2003, 532-535, 272-275.	1.9	11
24	Effect of hydrogen on ground state properties of silicon clusters (SinHm;n= 11â€“15,m= 0â€“4): a density functional based tight binding study. Journal of Physics Condensed Matter, 2008, 20, 045226.	1.8	11
25	Spin-polarized density functional investigation into ferromagnetism in C-doped (ZnO)_nclusters;n= 1â€“12, 16. Journal of Physics Condensed Matter, 2011, 23, 106004.	1.8	11
26	Influence of vacancy defects on the thermoelectric performance of SnSe sheet. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114814.	2.7	10
27	SPIN-POLARIZED DENSITY FUNCTIONAL STUDY ON HETEROFULLERENE AND METALLOFULLERENE CLUSTERS. International Journal of Modern Physics B, 2009, 23, 5119-5130.	2.0	9
28	Magnetism in strained pseudomorphic ultrathin films of fcc 3d-transition metals (Cr, Mn, Fe, Co and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 321, 2827-2832.	2.3	9
29	Effects of charged defects on the electronic and optical properties of self-assembled quantum dots. Physical Review B, 2012, 85, .	3.2	9
30	Spinâ€“orbit splitting in graphene, silicene and germanene: Dependence on buckling. International Journal of Modern Physics B, 2018, 32, 1850055.	2.0	8
31	Unraveling the effect of isotropic strain on the transport properties of half-Heusler alloy LiScGe. Journal of Alloys and Compounds, 2021, 859, 158232.	5.5	8
32	First-principles investigation into structural and magnetic properties of binary graphite 3d-transition metal intercalated compounds (XC6; X=Cr, Mn, Fe). Carbon, 2010, 48, 1341-1344.	10.3	7
33	Resonating valence bond quantum Monte Carlo: Application to the ozone molecule. International Journal of Quantum Chemistry, 2015, 115, 1673-1677.	2.0	7
34	Phonon density of states in nanocrystalline57Fe. Pramana - Journal of Physics, 2003, 60, 547-556.	1.8	6
35	Electronic and optical properties of strained In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>Ga<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â”</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>As/GaAs and strain-free GaAs/Al<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"	3.2	6
36	Exceptionally high open circuit thermoelectric figure of merit in two-dimensional tin sulphide. Journal of Physics Condensed Matter, 2021, 33, 315705.	1.8	4

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37	MAGNETIC COUPLING IN PSEUDOMORPHIC 2ML OVERLAYERS AND SANDWICH SUPERLATTICE STRUCTURES OF Cr, Mn, Fe, Co AND Ni ON FCC Cu(001). International Journal of Modern Physics B, 2010, 24, 405-412.	2.0	3
38	Manipulating fine structure splitting in semiconductor quantum dots. Journal of Physics: Conference Series, 2010, 245, 012008.	0.4	3
39	FIRST-PRINCIPLES INVESTIGATION INTO FERROMAGNETISM IN C-DOPED ZINC OXIDE CLUSTERS (ZnO)n; N = 1 â€“ 12. International Journal of Nanoscience, 2011, 10, 577-580.	0.7	3
40	Tuning fine structure splitting and exciton emission energy in semiconductor quantum dots. Journal of Luminescence, 2018, 202, 118-131.	3.1	3
41	Evidence of ZnCO3 interstitial phase in carbon implanted ZnO(002) thin films and room temperature ferromagnetism. Vacuum, 2021, 184, 109897.	3.5	3
42	Dynamics of hydrogen in hydrogenated amorphous silicon. Pramana - Journal of Physics, 2003, 61, 121-129.	1.8	2
43	Electronic structure modification in two-dimensional pentagonal PdS₂ by external strain. Canadian Journal of Physics, 2021, 99, 788-794.	1.1	2
44	Phenomenological description of phonon confinement in semiconductor nanocrystals. Surface Science, 2003, 532-535, 780-784.	1.9	1
45	STRUCTURAL PROPERTIES OF AMORPHOUS SILICON MODELS GENERATED WITH REVERSE MONTE-CARLO METHOD. International Journal of Modern Physics B, 2006, 20, 779-790.	2.0	1
46	Optical anisotropy and the direction of polarization of exciton emissions in a semiconductor quantum dot: Effect of heavy- and light-hole mixing. Chinese Physics B, 2017, 26, 087303.	1.4	1
47	Tuning electronic properties of pentagonal PdSe2 monolayer by applying external strain. Indian Journal of Physics, 2022, 96, 1037-1043.	1.8	1
48	Hydro-, Chloro- and Fluorographene Structures: A Density Functional Based Study. , 2011, , .		0
49	Static Structure Factor of Amorphous Rutile Nanoparticle: A Molecular Dynamics Study. , 2011, , .		0
50	Vibrational spectra of hydrogenated and halogenated graphene CX; X = H, F, Cl. Materials Research Express, 2019, 6, 045612.	1.6	0
51	Liquid hydrogen at the thermodynamic conditions of room temperature and a pressure of 490ÂGPa. Bulletin of Materials Science, 2019, 42, 1.	1.7	0
52	Effect of strain on electronic structure of AA stacked GeSe bilayer. Materials Today: Proceedings, 2020, 28, 1853-1857.	1.8	0
53	Advances in the applications of thermoelectric materials. , 2021, , 313-337.		0
54	Structural, electronic and thermoelectric properties of two-dimensional GeSe bilayer. AIP Conference Proceedings, 2020, , .	0.4	0

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55	Pressure induced enhancement in the power factor of p-type LiScSi half-Heusler alloy. AIP Conference Proceedings, 2020, , .	0.4	0