

A S Verma

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98
papers

1,192
citations

18
h-index

29
g-index

115
ext. papers

1,473
ext. citations

2.7
avg, IF

5.13
L-index

#	Paper	IF	Citations
98	Lattice constant of cubic perovskites. <i>Journal of Alloys and Compounds</i> , 2009 , 485, 514-518	5.7	120
97	Bulk modulus of cubic perovskites. <i>Journal of Alloys and Compounds</i> , 2012 , 541, 210-214	5.7	65
96	A theoretical study of H ₂ S adsorption on graphene doped with B, Al and Ga. <i>Physica B: Condensed Matter</i> , 2013 , 427, 12-16	2.8	49
95	Correlation between ionic charge and the lattice constant of cubic perovskite solids. <i>Physica Status Solidi (B): Basic Research</i> , 2008 , 245, 1520-1526	1.3	49
94	An empirical model for bulk modulus and cohesive energy of rocksalt-, zincblende- and chalcopyrite-structured solids. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 345-353	1.3	46
93	Elastic properties of chalcopyrite structured solids. <i>Materials Chemistry and Physics</i> , 2012 , 132, 416-420	4.4	37
92	Bond-stretching force constant of AIBIIC ₂ V I and AIBIVC ₂ V chalcopyrite semiconductors. <i>Solid State Communications</i> , 2009 , 149, 1236-1239	1.6	37
91	Ab initio studies of structural, electronic, optical, elastic and thermal properties of silver gallium dichalcogenides (AgGaX ₂ : X=S, Se, Te). <i>Materials Research Bulletin</i> , 2014 , 53, 218-233	5.1	31
90	Dielectric constants of AIBIIC ₂ V I and AIBIVC ₂ V chalcopyrite semiconductors. <i>Physica Scripta</i> , 2007 , 76, 22-24	2.6	31
89	Thermal properties of chalcopyrite semiconductors. <i>Philosophical Magazine</i> , 2009 , 89, 183-193	1.6	27
88	Bulk modulus and hardness of chalcopyrite structured solids. <i>Materials Chemistry and Physics</i> , 2013 , 139, 256-261	4.4	25
87	Correlation between ionic charge and the optical properties of zinc blende and complex crystal structured solids. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 192-199	1.3	25
86	Investigation of the optical and electrical characteristics of solution-processed poly (3 hexylthiophene) (P3HT): multiwall carbon nanotube (MWCNT) composite-based devices. <i>Materials Research Express</i> , 2017 , 4, 085905	1.7	24
85	First principles studies of structural, electronic, optical, elastic and thermal properties of Ag-chalcopyrites (AgInX ₂ : X=S, Se). <i>Physica B: Condensed Matter</i> , 2014 , 438, 97-108	2.8	22
84	First-principles calculations of the structural, phonon and thermal properties of ZnX (X = S, Se, Te) chalcogenides. <i>Physica Scripta</i> , 2014 , 89, 075704	2.6	20
83	Bond-stretching and bond-bending force constant of binary tetrahedral (AIIIBV and AIBVI) semiconductors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008 , 372, 7196-7198	2.3	20
82	Electronic and optical properties of zinc blende and complex crystal structured solids. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 4025-4034	1.3	20

81	An empirical model for dielectric constant and electronic polarizability of binary (ANB _{8N}) and ternary (ANB ₂ +NC _{27N}) tetrahedral semiconductors. <i>Journal of Alloys and Compounds</i> , 2009 , 486, 795-800	5.7	19
80	Synthesis and Characterization of Methylammonium Lead Iodide Perovskite and its Application in Planar Hetero-junction Devices. <i>Semiconductor Science and Technology</i> , 2018 , 33, 065012	1.8	18
79	Poly-(3-hexylthiophene)/graphene composite based organic photodetectors: The influence of graphene insertion. <i>Thin Solid Films</i> , 2019 , 675, 128-135	2.2	16
78	Models for lattice thermal expansion and thermal conductivity for ternary (ANB ₂ +NC _{27N}) tetrahedral semiconductors. <i>Materials Chemistry and Physics</i> , 2011 , 127, 74-78	4.4	16
77	Correlation between ionic charge and ground-state properties in rocksalt and zinc blende structured solids. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, 8603-12	1.8	16
76	First principles study of the structural, electronic, optical, elastic and thermodynamic properties of CdXAs ₂ (X=Si, Ge and Sn). <i>Materials Science in Semiconductor Processing</i> , 2014 , 27, 79-96	4.3	15
75	Correlation between ionic charge and the mechanical properties of complex structured solids. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 026213	1.8	15
74	EVALUATING OPTICAL PARAMETERS FROM ELECTRONIC STRUCTURE AND CRYSTAL STRUCTURE FOR BINARY (ANB _{8-N}) AND TERNARY $\{A^N B^{2+N} C^{7-N}\}_2$ TETRAHEDRAL SEMICONDUCTORS. <i>Modern Physics Letters B</i> , 2010 , 24, 2511-2524	1.6	14
73	Inherent properties of complex structured solids. <i>Physica Scripta</i> , 2009 , 79, 015302	2.6	14
72	Lattice constant of orthorhombic perovskite solids. <i>Journal of Alloys and Compounds</i> , 2009 , 480, 650-657	5.7	14
71	Mechanical and optical properties of AIIIVC ₂ V and AIIIC ₂ VI semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 2858-2863	1.3	14
70	LiBH ₄ as solid electrolyte for Li-ion batteries with Bi ₂ Te ₃ nanostructured anode. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 21709-21714	6.7	13
69	First principles study on the elastic and electronic properties of CdX (X = S, Se and Te) 2011 ,		13
68	Temperature induced band gap shrinkage in Cu ₂ GeSe ₃ : Role of electron-phonon interaction. <i>Physica B: Condensed Matter</i> , 2011 , 406, 2847-2850	2.8	13
67	Influence of MWCNT doping on performance of polymer bulk heterojunction based devices. <i>Optik</i> , 2018 , 160, 131-137	2.5	12
66	Ab initio studies of structural, elastic and thermal properties of copper indium dichalcogenides (CuInX ₂ : X=S, Se, Te). <i>Computational Materials Science</i> , 2014 , 86, 108-117	3.2	12
65	Lattice energy of zinc blende (AIIIV and AIIIVI) solids. <i>Physica Status Solidi (B): Basic Research</i> , 2008 , 245, 678-680	1.3	12
64	Investigations of fundamental physical and thermoelectric properties of methylammonium lead iodide (CH ₃ NH ₃ PbI ₃) perovskites. <i>Materials Research Express</i> , 2019 , 6, 126323	1.7	12

63	I-V and impedance characterization of a solution processed perovskite based heterojunction photodetector. <i>Superlattices and Microstructures</i> , 2018 , 122, 410-418	2.8	12
62	Electrochemical hydrogen evolution and storage studies on bismuth nano hexagons. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 21642-21648	6.7	11
61	Simulated solar cell device of CuGaSe 2 by using CdS, ZnS and ZnSe buffer layers. <i>Materials Science in Semiconductor Processing</i> , 2016 , 42, 288-302	4.3	11
60	Structural and electronic properties of sulphur-doped boron nitride nanotubes. <i>Solid State Communications</i> , 2012 , 152, 802-805	1.6	11
59	Extensive investigation of structural, electronic, optical, and thermoelectric properties of hybrid perovskite (CH ₃ NH ₃ PbBr ₃) with mechanical stability constants. <i>International Journal of Energy Research</i> , 2020 , 44, 11614-11628	4.5	11
58	Structural, electronic, optical, elastic and thermal properties of CdSnP ₂ with the application in solar cell devices. <i>Superlattices and Microstructures</i> , 2015 , 85, 859-871	2.8	10
57	Computational determination of structural, electronic, optical, thermoelectric and thermodynamic properties of hybrid perovskite CH ₃ CH ₂ NH ₃ GeI ₃ : An emerging material for photovoltaic cell. <i>Materials Chemistry and Physics</i> , 2020 , 251, 123103	4.4	10
56	Surface morphological, optical and electrical characterization of methylammonium lead bromide perovskite (CH ₃ NH ₃ PbBr ₃) thin film. <i>Physica Scripta</i> , 2019 , 94, 105821	2.6	9
55	Buffer layer selection for CuIn _{1-x} Ga _x Se ₂ based thin film solar cells. <i>Materials Research Express</i> , 2014 , 1, 016202	1.7	9
54	Thermal property of binary tetrahedral semiconductors. <i>Physica B: Condensed Matter</i> , 2009 , 404, 4051-4053	4.5	9
53	Computational determination of the physical-thermoelectric parameters of tin-based organometallic halide perovskites (CH ₃ NH ₃ SnX ₃ , X = Br and I): Emerging materials for optoelectronic devices. <i>Materials Chemistry and Physics</i> , 2020 , 253, 123389	4.4	8
52	Cohesive energy of zincblende (AIII ₂ BV and AII ₂ BVI) structured solids 2010 , 74, 851-855		8
51	Investigation of inherent properties of XScZ (X = Li, Na, K; Z = C, Si, Ge) half-Heusler compounds: Appropriate for photovoltaic and thermoelectric applications. <i>Physica B: Condensed Matter</i> , 2021 , 615, 412536	2.8	8
50	Solution processed graphene as electron transport layer for bulk heterojunction based devices. <i>Superlattices and Microstructures</i> , 2018 , 120, 788-795	2.8	8
49	Effect of graphene concentration on performance of MEH:PPV/graphene nanocomposite based devices. <i>Journal of Materials Science: Materials in Electronics</i> , 2018 , 29, 7979-7986	2.1	7
48	Structural, electronic, optical, elastic and thermal properties of ZnXAs ₂ (X = Si and Ge) chalcopyrite semiconductors. <i>European Physical Journal B</i> , 2014 , 87, 1	1.2	7
47	Ab initio studies of structural, electronic, optical, elastic and thermal properties of Ag-chalcopyrites (AgAlX ₂ : X=S, Se). <i>Materials Science in Semiconductor Processing</i> , 2014 , 26, 187-198	4.3	7
46	Effect of hybrid density functionals on half-Heusler LiZnX (X = N, P and As) semiconductors: potential materials for photovoltaic and thermoelectric applications. <i>Physica Scripta</i> , 2020 , 95, 095806	2.6	7

45	Impact of electron transport layer material on the performance of CH ₃ NH ₃ PbBr ₃ perovskite-based photodetectors. <i>Journal of Materials Science</i> , 2020 , 55, 4345-4357	4.3	7
44	An emerging high performance photovoltaic device with mechanical stability constants of hybrid (HC(NH ₂) ₂ PbI ₃) perovskite. <i>Journal of Materials Science: Materials in Electronics</i> , 2020 , 31, 18004-18017	2.1	7
43	Thermal and Optical Properties of Zn _{1-x} Mn _x Te Diluted Magnetic Semiconductor Studied by Photoacoustic Spectroscopic Method. <i>International Journal of Thermophysics</i> , 2010 , 31, 620-629	2.1	6
42	An empirical relationship between ionic charge and the electronic polarizability of binary and ternary tetrahedral semiconductors. <i>Physica Scripta</i> , 2009 , 79, 045703	2.6	5
41	Fundamental theoretical design of Na-ion and K-ion based double antiperovskite X ₆ SOA ₂ (X = Na, K; A = Cl, Br and I) halides: Potential candidate for energy storage and harvester. <i>International Journal of Energy Research</i> , 2021 , 45, 13442-13460	4.5	5
40	Investigation of structural, electronic, optical and thermoelectric properties of Ethylammonium tin iodide (CH ₃ CH ₂ NH ₃ SnI ₃): An appropriate hybrid material for photovoltaic application. <i>Materials Science in Semiconductor Processing</i> , 2020 , 115, 105111	4.3	5
39	First-principles spectroscopic screening of hybrid perovskite (CH ₃ CH ₂ NH ₃ PbI ₃) with fundamental physical properties: A potential photovoltaic absorber. <i>International Journal of Energy Research</i> , 2021 , 45, 908-919	4.5	5
38	C60 Concentration Influence on MEH-PPV:C60 Bulk Heterojunction-Based Schottky Devices. <i>Journal of Electronic Materials</i> , 2018 , 47, 7023-7033	1.9	5
37	Elastic moduli and brittleness of diamondlike and zinc blende structured solids. <i>Materials Chemistry and Physics</i> , 2012 , 135, 106-111	4.4	4
36	Elastic moduli of orthorhombic perovskites. <i>Solid State Communications</i> , 2013 , 158, 34-37	1.6	4
35	Fundamental physical properties of non-toxic tin-based formamidinium FASnX ₃ (X = I, Br, Cl) hybrid halide perovskites: Future opportunities in photovoltaic applications. <i>Energy Technology</i> ,	3.5	4
34	Ab initio studies of structural, electronic, optical, elastic and thermal properties of CuGaTe ₂ . <i>Semiconductors</i> , 2017 , 51, 679-687	0.7	3
33	Electrical Characterization of Hybrid Halide Perovskites Based Heterojunction Device. <i>Semiconductors</i> , 2019 , 53, 489-492	0.7	3
32	Extant ionic charge theory for bond orbital model based on the tight-binding method: A semi-empirical model applied to wide-bandgap II-VI and III-V semiconductors. <i>Materials Science in Semiconductor Processing</i> , 2015 , 29, 2-15	4.3	3
31	Investigation of fundamental physical properties of CdSiP ₂ and its application in solar cell devices by using (ZnX; X = Se, Te) buffer layers. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2016 , 205, 18-27	3.1	3
30	Density functional calculation of silicon adatom adsorption on pure and defected graphene. <i>Philosophical Magazine</i> , 2014 , 94, 867-875	1.6	3
29	INHERENT PROPERTIES OF TERNARY $(A^N B^{2+N} C_{2}^{7-N})$ TETRAHEDRAL SEMICONDUCTORS. <i>International Journal of Modern Physics B</i> , 2012 , 26, 1250079	1.1	3
28	Inherent properties of binary tetrahedral semiconductors. <i>Physica B: Condensed Matter</i> , 2010 , 405, 1737-1839	1.839	3

27	Mechanically stable with highly absorptive formamidinium lead halide perovskites [(HC(NH ₂) ₂ PbX ₃ ; X = Br, Cl]: Recent advances and perspectives. <i>International Journal of Quantum Chemistry</i> , 2021 , 121, e26671	2.1	3
26	Emerging potential antiperovskite materials ANX ₃ (A= P, As, Sb, Bi; X= Sr, Ca, Mg) for thermoelectric renewable energy generators. <i>Journal of Solid State Chemistry</i> , 2021 , 300, 122246	3.3	3
25	Investigation of dimensionality-dependent thermal stability of (Bi) ₂ (Te) ₃ . <i>Applied Physics A: Materials Science and Processing</i> , 2018 , 124, 1	2.6	2
24	Dielectric constants of zinc-blende semiconductors. <i>Physica Scripta</i> , 2012 , 85, 015705	2.6	2
23	Structural, electronic and thermal properties of ZnSiX ₂ (X=P, As) studied from first-principles theory 2013 ,		2
22	High frequency and static dielectric constants of zinc blende structured solids. <i>Solid State Communications</i> , 2011 , 151, 1945-1948	1.6	2
21	Temperature dependence of elastic constants for ionic solids. <i>Physica B: Condensed Matter</i> , 2009 , 404, 4106-4110	2.8	2
20	Elemental, Optical, and Electrochemical Study of CH ₃ NH ₃ PbI ₃ Perovskite-Based Hole Transport Layer-Free Photodiode. <i>Semiconductors</i> , 2020 , 54, 1023-1031	0.7	2
19	First-principles calculations of inherent properties of Rb based state-of-the-art half-Heusler compounds: promising materials for renewable energy applications. <i>Physica Scripta</i> , 2021 , 96, 115802	2.6	2
18	Inverted-heterostructure based device of CH ₃ NH ₃ PbBr ₃ for Schottky photodiode. <i>EPJ Applied Physics</i> , 2019 , 88, 30101	1.1	2
17	Analysis of perovskite based Schottky photodiode 2019 ,		1
16	Photoacoustic Spectroscopic Study of Optical Properties of (Cu) ₂ (GeTe) ₃ in Temperature Range from 80 K to 300 K. <i>International Journal of Thermophysics</i> , 2016 , 37, 1	2.1	1
15	Inverted organic solar cells based on PTB7:PC70BM bulk heterojunction 2019 ,		1
14	Computational study of copper-gallium disulphide-based solar cell devices by using CdS and ZnSe buffer layers. <i>IET Science, Measurement and Technology</i> , 2014 , 8, 294-303	1.5	1
13	ELECTRONIC, OPTICAL AND MECHANICAL PROPERTIES OF AIBVI SEMICONDUCTORS. <i>International Journal of Modern Physics B</i> , 2012 , 26, 1250020	1.1	1
12	First-Principles Calculations of the Structural, Electronic, Optical and Mechanical Properties of CdS, CdSe and CdTe. <i>Advanced Materials Research</i> , 2013 , 665, 302-306	0.5	1
11	Electronic and mechanical properties of ZnX (X = S, Se and Te) An ab initio study 2011 ,		1
10	Electronic polarizability of compound semiconductors. <i>Journal of Computational Methods in Sciences and Engineering</i> , 2010 , 10, 615-620	0.3	1

9	Study of Glass Transition Kinetics of Ge _{25-x} Se ₇₅ Sb _x (x = 12, 15 and 18) Glassy Alloys by Differential Scanning Calorimetry. <i>Advanced Science Letters</i> , 2016 , 22, 3863-3866	0.1	1
8	Emerging potential photovoltaic absorber hybrid halide perovskites (CH ₃ CH ₂ NH ₃ PbX ₃ ; X = Br, Cl) materials: an ab-initio calculation. <i>International Journal of Energy Research</i> , 2021 , 45, 15231-15244	4.5	1
7	Electronic and thermo-physical properties of double antiperovskites X ₆ SOA ₂ (X = Na, K and A = Cl, Br, I): A non-toxic and efficient energy storage materials. <i>International Journal of Quantum Chemistry</i> , 2021 , 121, e26759	2.1	1
6	Calculation of electronic and optical properties of methylammonium lead iodide perovskite for application in solar cell. <i>Environmental Science and Pollution Research</i> , 2021 , 28, 25382-25389	5.1	1
5	First-principles calculations for fundamental and spectroscopic screening of hybrid perovskite (HC(NH ₂) ₂ PbI ₃) formamidinium lead iodide. <i>Materials Chemistry and Physics</i> , 2022 , 126149	4.4	1
4	An efficient and stable lead-free organic-inorganic tin iodide perovskite for photovoltaic device: Progress and challenges. <i>Energy Reports</i> , 2022 , 8, 5753-5763	4.6	1
3	Inter atomic force constants of binary and ternary tetrahedral semiconductors. <i>Semiconductors</i> , 2016 , 50, 795-800	0.7	0
2	Comprehensive ab-initio calculations of AlNiX (X = P, As and Sb) half-Heusler compounds: Stabilities and applications as green energy resources. <i>Materials Chemistry and Physics</i> , 2022 , 275, 125233	4.4	0
1	Effect of nanostructuring on surface oxidation of bismuth telluride. <i>Materials Today: Proceedings</i> , 2021 , 38, 1255-1258	1.4	