A S Verma

List of Publications by Year
in descending order

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113	1,806	279798	361022
papers	citations	23 h-index	35 g-index

115	115	115	1206
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Comprehensive ab-initio calculations of AlNiX (X = P, As and Sb) half-Heusler compounds: Stabilities and applications as green energy resources. Materials Chemistry and Physics, 2022, 275, 125233.	4.0	18
2	Fundamental Physical Properties of Nontoxic Tinâ€Based Formamidinium FASnX₃ (X = I, Br,) Tj ETQq0 0 0 rgBT /Overlock 1 2022, 10, .	3.8	10
3	First-principles calculations for fundamental and spectroscopic screening of hybrid perovskite (HC(NH2)2PbI3) formamidinium lead iodide. Materials Chemistry and Physics, 2022, 287, 126149.	4.0	4
4	Highly absorptive and mechanically stable double perovskites Cs₂SnI₆ and Cs₂SnKrI₆. Physica Scripta, 2022, 97, 055821.	2.5	3
5	An efficient and stable lead-free organicâ€“inorganic tin iodide perovskite for photovoltaic device: Progress and challenges. Energy Reports, 2022, 8, 5753-5763.	5.1	14
6	Transition metal-based halides double Cs2ZSbX6 (Z = Ag, Cu, and X = Cl, Br, I) perovskites: A mechanically stable and highly absorptive materials for photovoltaic devices. Journal of Solid State Chemistry, 2022, 314, 123420.	2.9	19
7	<scp>Firstâ€principles</scp> spectroscopic screening of hybrid perovskite (<scp> CH ₃ CH) Tj ETQq1 1 0.784314 rgBT O potential photovoltaic absorber. International Journal of Energy Research, 2021, 45, 908-919.	4.5	12
8	Investigation of inherent properties of XScZ (X = Li, Na, K; Z = C, Si, Ge) half-Heusler compounds: Appropriate for photovoltaic and thermoelectric applications. Physica B: Condensed Matter, 2021, 615, 412536.	2.7	32
9	Effect of nanostructuring on surface oxidation of bismuth telluride. Materials Today: Proceedings, 2021, 38, 1255-1258.	1.8	0
10	Calculation of electronic and optical properties of methylammonium lead iodide perovskite for application in solar cell. Environmental Science and Pollution Research, 2021, 28, 25382-25389.	5.3	2
11	Fundamental theoretical design of Naâ€ion and Kâ€ion based double antiperovskite <scp> X ₆ SOA ₂ </scp> (XÂ=ÂNa, K; AÂ=ÂCl, Br and I) halides: Potential candidate for energy storage and harvester. International Journal of Energy Research, 2021, 45, 13442-13460.	4.5	26
12	Emerging potential photovoltaic absorber hybrid halide perovskites (<scp> CH ₃ CH) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 International Journal of Energy Research, 2021, 45, 15231-15244.	4.5	10
13	Mechanically stable with highly absorptive formamidinium lead halide perovskites		

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19	An emerging high performance photovoltaic device with mechanical stability constants of hybrid (HC(NH2)2PbI3) perovskite. Journal of Materials Science: Materials in Electronics, 2020, 31, 18004-18017.	2.2	19
20	Elemental, Optical, and Electrochemical Study of CH3NH3PbI3 Perovskite-Based Hole Transport Layer-Free Photodiode. Semiconductors, 2020, 54, 1023-1031.	0.5	3
21	Computational determination of the physical-thermoelectric parameters of tin-based organomatallic halide perovskites (CH3NH3SnX3, X = Br and I): Emerging materials for optoelectronic devices. Materials Chemistry and Physics, 2020, 253, 123389.	4.0	16
22	Computational determination of structural, electronic, optical, thermoelectric and thermodynamic properties of hybrid perovskite CH3CH2NH3GeI3: An emerging material for photovoltaic cell. Materials Chemistry and Physics, 2020, 251, 123103.	4.0	19
23	Investigation of structural, electronic, optical and thermoelectric properties of Ethylammonium tin iodide (CH3CH2NH3SnI3): An appropriate hybrid material for photovoltaic application. Materials Science in Semiconductor Processing, 2020, 115, 105111.	4.0	18
24	Effect of hybrid density functionals on halfâ€“Heusler LiZnX (X = N, P and As) semiconductors: potential materials for photovoltaic and thermoelectric applications. Physica Scripta, 2020, 95, 095806.	2.5	23
25	Study of MEH:PPV/AgMWCNTs composite for application in Schottky diode. AIP Conference Proceedings, 2019, , .	0.4	0
26	Inverted organic solar cells based on PTB7:PC70BM bulk heterojunction. AIP Conference Proceedings, 2019, , .	0.4	1
27	Surface morphological, optical and electrical characterization of methylammonium lead bromide perovskite (CH₃NH₃PbBr₃) thin film. Physica Scripta, 2019, 94, 105821.	2.5	14
28	Investigation of electrical properties of dye sensitized solar cells based on thin film electrodes. AIP Conference Proceedings, 2019, , .	0.4	0
29	Electrical Characterization of Hybrid Halide Perovskites Based Heterojunction Device. Semiconductors, 2019, 53, 489-492.	0.5	4
30	Analysis of perovskite based Schottky photodiode. AIP Conference Proceedings, 2019, , .	0.4	3
31	Poly-(3-hexylthiophene)/graphene composite based organic photodetectors: The influence of graphene insertion. Thin Solid Films, 2019, 675, 128-135.	1.8	30
32	Inverted-heterostructure based device of CH₃NH₃PbBr₃ for Schottky photodiode. EPJ Applied Physics, 2019, 88, 30101.	0.7	4
33	Investigations of fundamental physical and thermoelectric properties of methylammonium lead iodide (CH₃NH₃PbI₃) perovskites. Materials Research Express, 2019, 6, 126323.	1.6	17
34	Theoretical Investigation of Fundamental Properties with the Applications in Photovoltaic Devices of ZnGeP₂. Journal of Nanoelectronics and Optoelectronics, 2019, 14, 759-774.	0.5	1
35	Effect of graphene concentration on performance of MEH:PPV/graphene nanocomposite based devices. Journal of Materials Science: Materials in Electronics, 2018, 29, 7979-7986.	2.2	10
36	LiBH4 as solid electrolyte for Li-ion batteries with Bi2Te3 nanostructured anode. International Journal of Hydrogen Energy, 2018, 43, 21709-21714.	7.1	20

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37	Influence of MWCNT doping on performance of polymer bulk heterojunction based devices. Optik, 2018, 160, 131-137.	2.9	18
38	Electrochemical hydrogen evolution and storage studies on bismuth nano hexagons. International Journal of Hydrogen Energy, 2018, 43, 21642-21648.	7.1	15
39	Synthesis and Characterization of Methylammonium Lead Iodide Perovskite and its Application in Planar Hetero-junction Devices. Semiconductor Science and Technology, 2018, 33, 065012.	2.0	28
40	C60 Concentration Influence on MEH-PPV:C60 Bulk Heterojunction-Based Schottky Devices. Journal of Electronic Materials, 2018, 47, 7023-7033.	2.2	10
41	Optical and electrical properties of P3HT:graphene composite based devices. AIP Conference Proceedings, 2018, , .	0.4	0
42	Electrical, optical and photoresponse characteristics of P3HT:PCBM bulk heterojunction device. , 2018, , .		0
43	Electrical and optical properties of MEH-PPV: Fullerene (C60) based devices. , 2018, , .		0
44	Photo response of P3HT: PCBM/SWCNT bulk hetrojunction device. , 2018, , .		0
45	Fabrication and characterization of solution-processed perovskite photodetector. , 2018, , .		0
46	Solution processed graphene as electron transport layer for bulk heterojunction based devices. Superlattices and Microstructures, 2018, 120, 788-795.	3.1	15
47	I-V and impedance characterization of a solution processed perovskite based heterojunction photodetector. Superlattices and Microstructures, 2018, 122, 410-418.	3.1	23
48	Investigation of dimensionality-dependent thermal stability of $${hbox {Bi}}_{2} {hbox {Te}}_{3}$$ Bi 2 Te 3. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	3
49	Ab initio studies of structural, electronic, optical, elastic and thermal properties of CuGaTe2. Semiconductors, 2017, 51, 679-687.	0.5	9
50	Investigation of the optical and electrical characteristics of solution-processed poly (3) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 227 Td (hex Research Express, 2017, 4, 085905.	1.6	31
51	Inter atomic force constants of binary and ternary tetrahedral semiconductors. Semiconductors, 2016, 50, 795-800.	0.5	2
52	Modeling and analysis of CuGaS2 thin-film solar cell. AIP Conference Proceedings, 2016, , .	0.4	0
53	Investigation of fundamental physical properties of CdSiP2 and its application in solar cell devices by using (ZnX; X = Se, Te) buffer layers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2016, 205, 18-27.	3.5	3
54	Photoacoustic Spectroscopic Study of Optical Properties of $$hbox {Cu}_{2}hbox {GeTe}_{3}$$ Cu 2 GeTe 3 in Temperature Range from 80ÂK to 300ÂK. International Journal of Thermophysics, 2016, 37, 1.	2.1	2

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55	Simulated solar cell device of CuGaSe 2 by using CdS, ZnS and ZnSe buffer layers. Materials Science in Semiconductor Processing, 2016, 42, 288-302.	4.0	18
56	Study of Glass Transition Kinetics of Ge_{25â€“x}Se₇₅Sb_x (x = 12, 15 and 18) Glassy Alloys by Differential Scanning Calorimetery. Advanced Science Letters, 2016, 22, 3863-3866.	0.2	1
57	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. Materials Science in Semiconductor Processing, 2015, 29, 2-15.	4.0	7
58	First-principles calculations of the structural, phonon and thermal properties of ZnX (X = S, Se,Te) chalcogenides. Physica Scripta, 2014, 89, 075704.	2.5	24
59	Computational study of copperâ€“gallium disulphideâ€based solar cell devices by using CdS and ZnSe buffer layers. IET Science, Measurement and Technology, 2014, 8, 294-303.	1.6	3
60	Ab initio studies of structural, electronic, optical, elastic and thermal properties of silver gallium dichalcogenides (AgGaX2: X=S, Se, Te). Materials Research Bulletin, 2014, 53, 218-233.	5.2	40
61	First principles studies of structural, electronic, optical, elastic and thermal properties of Ag-chalcopyrites (AgInX2: X=S, Se). Physica B: Condensed Matter, 2014, 438, 97-108.	2.7	27
62	Buffer layer selection for CuIn_{1 â^'x}Ga_xSe₂based thin film solar cells. Materials Research Express, 2014, 1, 016202.	1.6	12
63	Structural, electronic, optical, elastic and thermal properties of ZnXAs2 (X = Si and Ge) chalcopyrite semiconductors. European Physical Journal B, 2014, 87, 1.	1.5	11
64	First principles study of the structural, electronic, optical, elastic and thermodynamic properties of CdXAs2 (X=Si, Ge and Sn). Materials Science in Semiconductor Processing, 2014, 27, 79-96.	4.0	17
65	Density functional calculation of silicon adatom adsorption on pure and defected graphene. Philosophical Magazine, 2014, 94, 867-875.	1.6	3
66	Ab initio studies of structural, elastic and thermal properties of copper indium dichalcogenides (CuInX2: X=S, Se, Te). Computational Materials Science, 2014, 86, 108-117.	3.0	16
67	Ab initio studies of structural, electronic, optical, elastic and thermal properties of Ag-chalcopyrites (AgAlX2: X=S, Se). Materials Science in Semiconductor Processing, 2014, 26, 187-198.	4.0	11
68	Elastic Moduli Of Perovskite-type Rare Earth Rhodium Borides And Carbides. Advanced Materials Letters, 2014, 5, 148-151.	0.6	1
69	Device Modeling of Thin Film CIGS/ZnSe Solar Cell. Advanced Science Letters, 2014, 20, 1554-1557.	0.2	0
70	A theoretical study of H2S adsorption on graphene doped with B, Al and Ga. Physica B: Condensed Matter, 2013, 427, 12-16.	2.7	58
71	Elastic moduli of orthorhombic perovskites. Solid State Communications, 2013, 158, 34-37.	1.9	4
72	Bulk modulus and hardness of chalcopyrite structured solids. Materials Chemistry and Physics, 2013, 139, 256-261.	4.0	31

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73	First-Principles Calculations of the Structural, Electronic, Optical and Mechanical Properties of CdS, CdSe and CdTe. Advanced Materials Research, 2013, 665, 302-306.	0.3	1
74	Structural, electronic and thermal properties of ZnSiX[sub 2] (X=P, As) studied from first-principles theory. , 2013, , .		2
75	FP-LAPW + lo calculations for the structural, electronic, optical and mechanical properties of ZnX (X) Tj ETQq1 1 0.784314 rgBT /Over		0
76	Bulk modulus of cubic perovskites. Journal of Alloys and Compounds, 2012, 541, 210-214.	5.5	92
77	ELECTRONIC, OPTICAL AND MECHANICAL PROPERTIES OF A^{II}B^{VI} SEMICONDUCTORS. International Journal of Modern Physics B, 2012, 26, 1250020.	2.0	2
78	Dielectric constants of zinc-blende semiconductors. Physica Scripta, 2012, 85, 015705.	2.5	5
79	INHERENT PROPERTIES OF TERNARY $(A^{N}B^{2+N}C_{2}^{7-N})$ TETRAHEDRAL SEMICONDUCTORS. International Journal of Modern Physics B, 2012, 26, 1250079.	2.0	3
80	Elastic properties of chalcopyrite structured solids. Materials Chemistry and Physics, 2012, 132, 416-420.	4.0	42
81	Elastic moduli and brittleness of diamondlike and zinc blende structured solids. Materials Chemistry and Physics, 2012, 135, 106-111.	4.0	7
82	Structural and electronic properties of sulphur-doped boron nitride nanotubes. Solid State Communications, 2012, 152, 802-805.	1.9	12
83	Electronic and mechanical properties of ZnX (Xâ€‰=â€‰S, Se and Te)â€”An ab initio study. , 2011, , .		1
84	First principles study on the elastic and electronic properties of CdX (Xâ€‰=â€‰S, Se and Te). AIP Conference Proceedings, 2011, , .	0.4	17
85	Opto-Electronic Properties of A[sup I]B[sup III]C[sub 2]VI] Ternary Chalcopyrite Semiconducting Materials. , 2011, , .		0
86	High frequency and static dielectric constants of zinc blende structured solids. Solid State Communications, 2011, 151, 1945-1948.	1.9	4
87	Models for lattice thermal expansion and thermal conductivity for ternary (ANB2+NC27âˆ’N) tetrahedral semiconductors. Materials Chemistry and Physics, 2011, 127, 74-78.	4.0	16
88	Temperature induced band gap shrinkage in Cu2GeSe3: Role of electronâ€“phonon interaction. Physica B: Condensed Matter, 2011, 406, 2847-2850.	2.7	20
89	Elastic Constants of CaF[sub 2] at Different Temperature. , 2011, , .		0
90	Cohesive energy of zincblende (AIIIBV and AIIBVI) structured solids. Pramana - Journal of Physics, 2010, 74, 851-855.	1.8	14

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91	Thermal and Optical Properties of Zn1â^'x Mn x Te Diluted Magnetic Semiconductor Studied by Photoacoustic Spectroscopic Method. International Journal of Thermophysics, 2010, 31, 620-629.	2.1	7
92	Inherent properties of binary tetrahedral semiconductors. Physica B: Condensed Matter, 2010, 405, 1737-1739.	2.7	5
93	Electronic polarizability of compound semiconductors. Journal of Computational Methods in Sciences and Engineering, 2010, 10, 615-620.	0.2	1
94	EVALUATING OPTICAL PARAMETERS FROM ELECTRONIC STRUCTURE AND CRYSTAL STRUCTURE FOR BINARY (ANB8-N) AND TERNARY $({m A}^N {m B}^{2 + N}{m C}^{7 - N}_2)$ TETRAHEDRAL SEMICONDUCTORS. Modern Physics Letters B, 2010, 24, 2511-2524.	1.9	16
95	An empirical relationship between ionic charge and the electronic polarizability of binary and ternary tetrahedral semiconductors. Physica Scripta, 2009, 79, 045703.	2.5	6
96	Inherent properties of complex structured solids. Physica Scripta, 2009, 79, 015302.	2.5	17
97	Correlation between ionic charge and the optical properties of zinc blende and complex crystal structured solids. Physica Status Solidi (B): Basic Research, 2009, 246, 192-199.	1.5	32
98	An empirical model for bulk modulus and cohesive energy of rocksaltâ€¸ zincblendeâ€•and chalcopyriteâ€structured solids. Physica Status Solidi (B): Basic Research, 2009, 246, 345-353.	1.5	49
99	Thermal property of binary tetrahedral semiconductors. Physica B: Condensed Matter, 2009, 404, 4051-4053.	2.7	10
100	Temperature dependence of elastic constants for ionic solids. Physica B: Condensed Matter, 2009, 404, 4106-4110.	2.7	4
101	Bond-stretching force constant of AIBIIIC2V I and AIIBIVC2V chalcopyrite semiconductors. Solid State Communications, 2009, 149, 1236-1239.	1.9	44
102	Lattice constant of orthorhomic perovskite solids. Journal of Alloys and Compounds, 2009, 480, 650-657.	5.5	15
103	An empirical model for dielectric constant and electronic polarizability of binary (ANB8â^'N) and ternary (ANB2+NC27â^'N) tetrahedral semiconductors. Journal of Alloys and Compounds, 2009, 486, 795-800.	5.5	20
104	Thermal properties of chalcopyrite semiconductors. Philosophical Magazine, 2009, 89, 183-193.	1.6	36
105	Lattice constant of cubic perovskites. Journal of Alloys and Compounds, 2009, 485, 514-518.	5.5	147
106	Lattice energy of zinc blende (A^{III}B^V and A^{II}B^{VI}) solids. Physica Status Solidi (B): Basic Research, 2008, 245, 678-680.	1.5	12
107	Correlation between ionic charge and the lattice constant of cubic perovskite solids. Physica Status Solidi (B): Basic Research, 2008, 245, 1520-1526.	1.5	59
108	Bond-stretching and bond-bending force constant of binary tetrahedral (AIIIBV and AIIBVI) semiconductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 7196-7198.	2.1	29

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109	Dielectric constants ofAIBIIIC2VIandAIIBIVC2Vchalcopyrite semiconductors. Physica Scripta, 2007, 76, 22-24.	2.5	39
110	Correlation between ionic charge and the mechanical properties of complex structured solids. Journal of Physics Condensed Matter, 2007, 19, 026213.	1.8	25
111	Correlation between ionic charge and ground-state properties in rocksalt and zinc blende structured solids. Journal of Physics Condensed Matter, 2006, 18, 8603-8612.	1.8	23
112	Mechanical and optical properties of AIIBIVC2V and AIBIIIC2VI semiconductors. Physica Status Solidi (B): Basic Research, 2006, 243, 2858-2863.	1.5	15
113	Electronic and optical properties of zinc blende and complex crystal structured solids. Physica Status Solidi (B): Basic Research, 2006, 243, 4025-4034.	1.5	24