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	Lattice constant of cubic perovskites. Journal of Alloys and Compounds, 2009, 485, 514-518.	5.5	147
2	Bulk modulus of cubic perovskites. Journal of Alloys and Compounds, 2012, 541, 210-214.	5.5	92
3	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
4	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
5	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
6	Bond-stretching force constant of AIBIIIC2V I and AIIBIVC2V chalcopyrite semiconductors. Solid State Communications, 2009, 149, 1236-1239.	1.9	44
7	Elastic properties of chalcopyrite structured solids. Materials Chemistry and Physics, 2012, 132, 416-420.	4.0	42
8	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
9	Dielectric constants ofAIBIIIC2VIandAIIBIVC2Vchalcopyrite semiconductors. Physica Scripta, 2007, 76, 22-24.	2.5	39
10	Thermal properties of chalcopyrite semiconductors. Philosophical Magazine, 2009, 89, 183-193.	1.6	36
11	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
12	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
13	Bulk modulus and hardness of chalcopyrite structured solids. Materials Chemistry and Physics, 2013, 139, 256-261.	4.0	31
14	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
15	Poly-(3-hexylthiophene)/graphene composite based organic photodetectors: The influence of graphene insertion. Thin Solid Films, 2019, 675, 128-135.	1.8	30
16	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
17	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
18	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

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19	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
20	Correlation between ionic charge and the mechanical properties of complex structured solids. Journal of Physics Condensed Matter, 2007, 19, 026213.	1.8	25
21	Electronic and thermoâ€physical properties of double antiperovskites <scp>X₆SOA₂</scp> (XÂ=ÂNa, K and AÂ=ÂCl, Br, I): AÂnonâ€toxic and efficient energy storage materials. International Journal of Quantum Chemistry, 2021, 121, e26759.	2.0	25
22	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
23	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
24	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
25	I-V and impedance characterization of a solution processed perovskite based heterojunction photodetector. Superlattices and Microstructures, 2018, 122, 410-418.	3.1	23
26	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
27	First-principles calculations of inherent properties of Rb based state-of-the-art half-Heusler compounds: promising materials for renewable energy applications. Physica Scripta, 2021, 96, 115802.	2.5	21
28	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
29	Temperature induced band gap shrinkage in Cu2GeSe3: Role of electronâ€“phonon interaction. Physica B: Condensed Matter, 2011, 406, 2847-2850.	2.7	20
30	LiBH4 as solid electrolyte for Li-ion batteries with Bi2Te3 nanostructured anode. International Journal of Hydrogen Energy, 2018, 43, 21709-21714.	7.1	20
31	Extensive investigation of structural, electronic, optical, and thermoelectric properties of hybrid perovskite (<scp> CH ₃ NH ₃ PbBr ₃ </scp>) with mechanical stability constants. International Journal of Energy Research, 2020, 44, 11614-11628.	4.5	20
32	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
33	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
34	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
35	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
36	Influence of MWCNT doping on performance of polymer bulk heterojunction based devices. Optik, 2018, 160, 131-137.	2.9	18

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37	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
38	Emerging potential antiperovskite materials ANX3 (A= P, As, Sb, Bi; X= Sr, Ca, Mg) for thermoelectric renewable energy generators. Journal of Solid State Chemistry, 2021, 300, 122246.	2.9	18
39	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
40	Inherent properties of complex structured solids. Physica Scripta, 2009, 79, 015302.	2.5	17
41	First principles study on the elastic and electronic properties of CdX (Xâ€‰=â€‰S, Se and Te). AIP Conference Proceedings, 2011, , .	0.4	17
42	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
43	Investigations of fundamental physical and thermoelectric properties of methylammonium lead iodide (CH₃NH₃PbI₃) perovskites. Materials Research Express, 2019, 6, 126323.	1.6	17
44	Impact of electron transport layer material on the performance of CH3NH3PbBr3 perovskite-based photodetectors. Journal of Materials Science, 2020, 55, 4345-4357.	3.7	17
45	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
46	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
47	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
48	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
49	Mechanical and optical properties of AIIBIVC2V and AIBIIIC2VI semiconductors. Physica Status Solidi (B): Basic Research, 2006, 243, 2858-2863.	1.5	15
50	Lattice constant of orthorhomic perovskite solids. Journal of Alloys and Compounds, 2009, 480, 650-657.	5.5	15
51	Electrochemical hydrogen evolution and storage studies on bismuth nano hexagons. International Journal of Hydrogen Energy, 2018, 43, 21642-21648.	7.1	15
52	Solution processed graphene as electron transport layer for bulk heterojunction based devices. Superlattices and Microstructures, 2018, 120, 788-795.	3.1	15
53	Mechanically stable with highly absorptive formamidinium lead halide perovskites		

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55	Surface morphological, optical and electrical characterization of methylammonium lead bromide perovskite (CH₃NH₃PbBr₃) thin film. Physica Scripta, 2019, 94, 105821.	2.5	14
56	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
57	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
58	Structural and electronic properties of sulphur-doped boron nitride nanotubes. Solid State Communications, 2012, 152, 802-805.	1.9	12
59	Buffer layer selection for CuIn_{1 â^' x}Ga_xSe₂based thin film solar cells. Materials Research Express, 2014, 1, 016202.	1.6	12
60	<scp>Firstâ€principles</scp> spectroscopic screening of hybrid perovskite (<scp> CH ₃ CH) Tj ETQq0 0 0 rgBT /Overlock 1 potential photovoltaic absorber. International Journal of Energy Research, 2021, 45, 908-919.	4.5	12
61	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
62	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
63	Thermal property of binary tetrahedral semiconductors. Physica B: Condensed Matter, 2009, 404, 4051-4053.	2.7	10
64	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
65	C60 Concentration Influence on MEH-PPV:C60 Bulk Heterojunction-Based Schottky Devices. Journal of Electronic Materials, 2018, 47, 7023-7033.	2.2	10
66	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
67	Fundamental Physical Properties of Nontoxic Tinâ€Based Formamidinium FASnX₃ (X = I, Br,) Tj ETQq1 1 0.784314 rgBT / 2022, 10, .	3.8	10
68	Ab initio studies of structural, electronic, optical, elastic and thermal properties of CuGaTe2. Semiconductors, 2017, 51, 679-687.	0.5	9
69	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
70	Elastic moduli and brittleness of diamondlike and zinc blende structured solids. Materials Chemistry and Physics, 2012, 135, 106-111.	4.0	7
71	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
72	An empirical relationship between ionic charge and the electronic polarizability of binary and ternary tetrahedral semiconductors. Physica Scripta, 2009, 79, 045703.	2.5	6

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73	Inherent properties of binary tetrahedral semiconductors. Physica B: Condensed Matter, 2010, 405, 1737-1739.	2.7	5
74	Dielectric constants of zinc-blende semiconductors. Physica Scripta, 2012, 85, 015705.	2.5	5
75	Temperature dependence of elastic constants for ionic solids. Physica B: Condensed Matter, 2009, 404, 4106-4110.	2.7	4
76	High frequency and static dielectric constants of zinc blende structured solids. Solid State Communications, 2011, 151, 1945-1948.	1.9	4
77	Elastic moduli of orthorhombic perovskites. Solid State Communications, 2013, 158, 34-37.	1.9	4
78	Electrical Characterization of Hybrid Halide Perovskites Based Heterojunction Device. Semiconductors, 2019, 53, 489-492.	0.5	4
79	Inverted-heterostructure based device of CH₃NH₃PbBr₃ for Schottky photodiode. EPJ Applied Physics, 2019, 88, 30101.	0.7	4
80	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
81	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
82	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
83	Density functional calculation of silicon adatom adsorption on pure and defected graphene. Philosophical Magazine, 2014, 94, 867-875.	1.6	3
84	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
85	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
86	Analysis of perovskite based Schottky photodiode. AIP Conference Proceedings, 2019, , .	0.4	3
87	Elemental, Optical, and Electrochemical Study of CH3NH3PbI3 Perovskite-Based Hole Transport Layer-Free Photodiode. Semiconductors, 2020, 54, 1023-1031.	0.5	3
88	Highly absorptive and mechanically stable double perovskites Cs₂SnI₆ and Cs₂SnKrI₆. Physica Scripta, 2022, 97, 055821.	2.5	3
89	ELECTRONIC, OPTICAL AND MECHANICAL PROPERTIES OF A^{II}B^{VI} SEMICONDUCTORS. International Journal of Modern Physics B, 2012, 26, 1250020.	2.0	2
90	Structural, electronic and thermal properties of ZnSiX[sub 2] (X=P, As) studied from first-principles theory. , 2013, , .		2

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91	Inter atomic force constants of binary and ternary tetrahedral semiconductors. Semiconductors, 2016, 50, 795-800.	0.5	2
92	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
93	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
94	Electronic polarizability of compound semiconductors. Journal of Computational Methods in Sciences and Engineering, 2010, 10, 615-620.	0.2	1
95	Electronic and mechanical properties of ZnX (Xâ€‰=â€‰S, Se and Te)â€”An ab initio study. , 2011, , .		1
96	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
97	Inverted organic solar cells based on PTB7:PC70BM bulk heterojunction. AIP Conference Proceedings, 2019, , .	0.4	1
98	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
99	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
100	Elastic Moduli Of Perovskite-type Rare Earth Rhodium Borides And Carbides. Advanced Materials Letters, 2014, 5, 148-151.	0.6	1
101	Opto-Electronic Properties of A[sup I]B[sup III]C[sub 2]VI] Ternary Chalcopyrite Semiconducting Materials. , 2011, , .		0
102	Elastic Constants of CaF[sub 2] at Different Temperature. , 2011, , .		0
103	FP-LAPW + lo calculations for the structural, electronic, optical and mechanical properties of ZnX (X) Tj ETQq1 1 0.784314 rgBT /Over		0
104	Modeling and analysis of CuGaS2 thin-film solar cell. AIP Conference Proceedings, 2016, , .	0.4	0
105	Optical and electrical properties of P3HT:graphene composite based devices. AIP Conference Proceedings, 2018, , .	0.4	0
106	Electrical, optical and photoresponse characteristics of P3HT:PCBM bulk heterojunction device. , 2018, , .		0
107	Electrical and optical properties of MEH-PPV: Fullerene (C60) based devices. , 2018, , .		0
108	Photo response of P3HT: PCBM/SWCNT bulk hetrojunction device. , 2018, , .		0

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109	Fabrication and characterization of solution-processed perovskite photodetector. , 2018, , .		0
110	Study of MEH:PPV/AgMWCNTs composite for application in Schottky diode. AIP Conference Proceedings, 2019, , .	0.4	0
111	Investigation of electrical properties of dye sensitized solar cells based on thin film electrodes. AIP Conference Proceedings, 2019, , .	0.4	0
112	Effect of nanostructuring on surface oxidation of bismuth telluride. Materials Today: Proceedings, 2021, 38, 1255-1258.	1.8	0
113	Device Modeling of Thin Film CIGS/ZnSe Solar Cell. Advanced Science Letters, 2014, 20, 1554-1557.	0.2	0