

# N S Chauhan

## List of Publications by Year in descending order

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58  
papers

1,978  
citations

236833

25  
h-index

254106

43  
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58  
all docs

58  
docs citations

58  
times ranked

1709  
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of sintering temperature on electronic and mechanical properties of thermoelectric material: A theoretical and experimental study of TiCoSb half-Heusler alloy. <i>Materials Chemistry and Physics</i> , 2022, 281, 125854.	2.0	11
2	Contrasting role of bismuth doping on the thermoelectric performance of VFeSb half-Heusler. <i>Journal of Alloys and Compounds</i> , 2022, 908, 164623.	2.8	10
3	In Situ Evolution of Secondary Metallic Phases in Off-Stoichiometric ZrNiSn for Enhanced Thermoelectric Performance. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 19579-19593.	4.0	18
4	Low lattice thermal conductivity and microstructural evolution in VFeSb half-Heusler alloys. <i>Materialia</i> , 2022, 22, 101430.	1.3	12
5	CoSb <sub>3</sub> based thermoelectric elements pre-requisite for device fabrication. <i>Solid State Sciences</i> , 2022, 129, 106900.	1.5	8
6	Melt-Spun SiGe Nano-Alloys: Microstructural Engineering Towards High Thermoelectric Efficiency. <i>Journal of Electronic Materials</i> , 2021, 50, 364-374.	1.0	5
7	High Thermoelectric Performance in n-Type Degenerate ZrNiSn-Based Half-Heusler Alloys Driven by Enhanced Weighted Mobility and Lattice Anharmonicity. <i>ACS Applied Energy Materials</i> , 2021, 4, 3393-3403.	2.5	30
8	Compositional Fluctuations Mediated by Excess Tellurium in Bismuth Antimony Telluride Nanocomposites Yield High Thermoelectric Performance. <i>Journal of Physical Chemistry C</i> , 2021, 125, 20184-20194.	1.5	10
9	Tuning the Plasmonic Response of AuGe Nanoparticles on GaAs Substrates: Implications for Photodetectors. <i>ACS Applied Nano Materials</i> , 2021, 4, 9566-9583.	2.4	4
10	Synergistic Optimization of Electronic and Thermal Transport Properties for Achieving High $\langle i \rangle ZT \langle /i \rangle$ in Ni and Te Co-substituted CoSb <sub>3</sub> . <i>ACS Applied Energy Materials</i> , 2021, 4, 14210-14219.	2.5	11
11	Band Structure Modification and Mass Fluctuation Effects of Isoelectronic Germanium-Doping on Thermoelectric Properties of ZrNiSn. <i>ACS Applied Energy Materials</i> , 2020, 3, 1349-1357.	2.5	27
12	Scalable colloidal synthesis of Bi <sub>2</sub> Te <sub>2.7</sub> Se <sub>0.3</sub> plate-like particles give access to a high-performing n-type thermoelectric material for low temperature application. <i>Nanoscale Advances</i> , 2020, 2, 5699-5709.	2.2	13
13	Compositional modulation is driven by aliovalent doping in n-type TiCoSb based half-Heuslers for tuning thermoelectric transport. <i>Intermetallics</i> , 2020, 125, 106914.	1.8	16
14	Defect Engineering for Enhancement of Thermoelectric Performance of (Zr, Hf)NiSn-Based n-type Half-Heusler Alloys. <i>Journal of Physical Chemistry C</i> , 2020, 124, 8584-8593.	1.5	43
15	Facile bulk synthesis of high performance $\hat{1}^2$ -Zn <sub>4</sub> Sb <sub>3</sub> for thermoelectric applications. <i>Materials Letters</i> , 2020, 265, 127428.	1.3	4
16	Optimization of electrical and thermal transport properties of Fe <sub>0.25</sub> Co <sub>0.75</sub> Sb <sub>3</sub> Skutterudite employing the isoelectronic Bi-doping. <i>Intermetallics</i> , 2020, 123, 106796.	1.8	10
17	Enhanced Thermoelectric Performance in Hf-Free p-Type (Ti, Zr)CoSb Half-Heusler Alloys. <i>Journal of Electronic Materials</i> , 2019, 48, 6700-6709.	1.0	29
18	Enhancement in thermoelectric performance of single step synthesized Mg doped Cu <sub>2</sub> Se: An experimental and theoretical study. <i>Intermetallics</i> , 2019, 112, 106541.	1.8	29

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19	Collective Effect of Fe and Se To Improve the Thermoelectric Performance of Unfilled p-Type CoSb <sub>3</sub> Skutterudites. ACS Applied Energy Materials, 2019, 2, 1067-1076.	2.5	32
20	Compositional Tailoring for Realizing High Thermoelectric Performance in Hafnium-Free n-Type ZrNiSn Half-Heusler Alloys. ACS Applied Materials & Interfaces, 2019, 11, 47830-47836.	4.0	52
21	Spinodal decomposition in (Ti, Zr)CoSb half-Heusler: A nanostructuring route toward high efficiency thermoelectric materials. Journal of Applied Physics, 2019, 126, .	1.1	20
22	Melt spinning: A rapid and cost effective approach over ball milling for the production of nanostructured p-type Si <sub>80</sub> Ge <sub>20</sub> with enhanced thermoelectric properties. Journal of Alloys and Compounds, 2019, 781, 344-350.	2.8	6
23	Enhanced thermoelectric performance in p-type ZrCoSb based half-Heusler alloys employing nanostructuring and compositional modulation. Journal of Materiomics, 2019, 5, 94-102.	2.8	44
24	Tin doped Cu <sub>3</sub> SbSe <sub>4</sub> : A stable thermoelectric analogue for the mid-temperature applications. Materials Research Bulletin, 2019, 113, 38-44.	2.7	15
25	Thermoelectric properties of p-type sb-doped Cu <sub>2</sub> SnSe <sub>3</sub> near room and mid temperature applications. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	23
26	Facile synthesis of earth-abundant and non-toxic p-type Si <sub>96</sub> B <sub>4</sub> /SiCp nanocomposites with enhanced thermoelectric performance. Materials Science in Semiconductor Processing, 2018, 75, 234-238.	1.9	6
27	Vanadium-Doping-Induced Resonant Energy Levels for the Enhancement of Thermoelectric Performance in Hf-Free ZrNiSn Half-Heusler Alloys. ACS Applied Energy Materials, 2018, 1, 757-764.	2.5	63
28	Tuning the thermoelectric properties by manipulating copper in Cu <sub>2</sub> SnSe <sub>3</sub> system. Journal of Alloys and Compounds, 2018, 748, 273-280.	2.8	13
29	Facile synthesis of nanostructured n-type SiGe alloys with enhanced thermoelectric performance using rapid solidification employing melt spinning followed by spark plasma sintering. Current Applied Physics, 2018, 18, 1540-1545.	1.1	11
30	Enhancement in thermoelectric performance of bulk CrSi <sub>2</sub> dispersed with nanostructured SiGe nanoinclusions. Journal of Alloys and Compounds, 2018, 765, 412-417.	2.8	23
31	Modulating the lattice dynamics of n-type Heusler compounds via tuning Ni concentration. Applied Physics Letters, 2018, 113, .	1.5	22
32	Compositional tuning of ZrNiSn half-Heusler alloys: Thermoelectric characteristics and performance analysis. Journal of Physics and Chemistry of Solids, 2018, 123, 105-112.	1.9	59
33	Facile fabrication of p- and n-type half-Heusler alloys with enhanced thermoelectric performance and low specific contact resistance employing spark plasma sintering. Materials Letters, 2018, 228, 250-253.	1.3	15
34	A nanocomposite approach for enhancement of thermoelectric performance in Hafnium-free Half-Heuslers. Materialia, 2018, 1, 168-174.	1.3	26
35	The effect of carbon nanotubes (CNT) on thermoelectric properties of lead telluride (PbTe) nanocubes. Current Applied Physics, 2017, 17, 306-313.	1.1	36
36	Enhanced thermoelectric performance of Pb doped Cu <sub>2</sub> SnSe <sub>3</sub> synthesized employing spark plasma sintering. Physica B: Condensed Matter, 2017, 512, 39-44.	1.3	24

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37	Low-temperature thermoelectric properties of Pb doped Cu <sub>2</sub> SnSe <sub>3</sub> . Physica B: Condensed Matter, 2017, 520, 7-12.	1.3	17
38	Enhancement in thermoelectric performance of SiGe nanoalloys dispersed with SiC nanoparticles. Physical Chemistry Chemical Physics, 2017, 19, 25180-25185.	1.3	36
39	A synergistic combination of atomic scale structural engineering and panoscopic approach in p-type ZrCoSb-based half-Heusler thermoelectric materials for achieving high ZT. Journal of Materials Chemistry C, 2016, 4, 5766-5778.	2.7	39
40	The low and high temperature thermoelectric properties of Sb doped Cu <sub>2</sub> SnSe <sub>3</sub> . Materials Research Bulletin, 2016, 83, 160-166.	2.7	18
41	Tuning the carrier concentration using Zintl chemistry in Mg <sub>3</sub> Sb <sub>2</sub> , and its implications for thermoelectric figure-of-merit. Physical Chemistry Chemical Physics, 2016, 18, 6191-6200.	1.3	59
42	The effect of doping on thermoelectric performance of p-type SnSe: Promising thermoelectric material. Journal of Alloys and Compounds, 2016, 668, 152-158.	2.8	130
43	The role of nanoscale defect features in enhancing the thermoelectric performance of p-type nanostructured SiGe alloys. Nanoscale, 2015, 7, 12474-12483.	2.8	83
44	Giant enhancement in thermoelectric performance of copper selenide by incorporation of different nanoscale dimensional defect features. Nano Energy, 2015, 13, 36-46.	8.2	158
45	Enhanced thermoelectric performance of spark plasma sintered copper-deficient nanostructured copper selenide. Journal of Physics and Chemistry of Solids, 2015, 81, 100-105.	1.9	48
46	Enhanced power factor and reduced thermal conductivity of a half-Heusler derivative Ti <sub>9</sub> Ni <sub>7</sub> Sn <sub>8</sub> : A bulk nanocomposite thermoelectric material. Applied Physics Letters, 2015, 106, 103901.	1.5	24
47	Correlation between microstructure and drastically reduced lattice thermal conductivity in bismuth telluride/bismuth nanocomposites for high thermoelectric figure of merit. Materials Science in Semiconductor Processing, 2015, 40, 453-462.	1.9	16
48	Panoscopically optimized thermoelectric performance of a half-Heusler/full-Heusler based in situ bulk composite Zr <sub>0.7</sub> Hf <sub>0.3</sub> Ni <sub>1+x</sub> Sn: an energy and time efficient way. Physical Chemistry Chemical Physics, 2015, 17, 30090-30101.	1.3	35
49	Mechanical properties and microstructure of spark plasma sintered nanostructured p-type SiGe thermoelectric alloys. Materials and Design, 2015, 87, 414-420.	3.3	31
50	Significantly enhanced thermoelectric figure of merit of p-type Mg <sub>3</sub> Sb <sub>2</sub> -based Zintl phase compounds via nanostructuring and employing high energy mechanical milling coupled with spark plasma sintering. Journal of Materials Chemistry A, 2015, 3, 10777-10786.	5.2	76
51	Thermoelectric and mechanical properties of spark plasma sintered Cu <sub>3</sub> SbSe <sub>3</sub> and Cu <sub>3</sub> SbSe <sub>4</sub> : Promising thermoelectric materials. Applied Physics Letters, 2014, 105, .	1.5	52
52	Microstructure and mechanical properties of thermoelectric nanostructured n-type silicon-germanium alloys synthesized employing spark plasma sintering. Applied Physics Letters, 2014, 105, .	1.5	41
53	Band structure and transport studies of copper selenide: An efficient thermoelectric material. Applied Physics Letters, 2014, 105, .	1.5	34
54	Nanofluids: Effectual Analysis in Automotive Application. , 2014, , .		2

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55	Thermoelectric properties of Cu <sub>3</sub> SbSe <sub>3</sub> with intrinsically ultralow lattice thermal conductivity. Journal of Materials Chemistry A, 2014, 2, 15829-15835.	5.2	47
56	Enhanced thermoelectric figure-of-merit in spark plasma sintered nanostructured n-type SiGe alloys. Applied Physics Letters, 2012, 101, .	1.5	133
57	Microstructural features and mechanical properties of Al 5083/SiCp metal matrix nanocomposites produced by high energy ball milling and spark plasma sintering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 545, 97-102.	2.6	118
58	The Role of Magnetic Interaction on the Thermoelectric Performance of ZrNiSn Half-Heusler Alloys. Physica Status Solidi (A) Applications and Materials Science, 0, , 2100765.	0.8	1