Profile

Name of the Faculty	Dr. Tavneet Kaur
Designation	Assistant Professor
Department	Freshman Engineering Department
Area of Interest	Computational Materials Science
Subjects Taught	Semiconductor Devices Lab
JNTUH Registration Id	1333-250121-150003
College Staff Code	SC2039
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Educational Qualifications:

S. No.	Degree	Specialization	University/College	Year
1	Ph. D	Condensed Matter Physics	Sant Longowal Institute of Engineering and Technology	2022
2	M. Sc	Physics	Punjab Agricultural University	2017
3	B. Sc.	Physics, Chemistry and Mathematics	Panjab University/R. S. D. College	2015

Publications Details:

S. No.	Publication details
1.	An *Ab Initio* study of electronic, mechanical, thermoelectric and vibrational properties of Dirac Semimetals Ca_3PbO and Ca_3SnO. **Tavneet Kaur*** and M. M. Sinha. Materials Today Communications 26(2021) 101741 https://doi.org/10.1016/j.mtcomm.2020.101741
2.	Revealing the trend of Structural, Electronic, Mechanical and Vibrational properties in Co_2VX (X= Si, Ge, Sn). **Tavneet Kaur*** and M. M. Sinha. Journal of Solid State Chemistry 297 (2021) 122065 https://doi.org/10.1016/j.jssc.2021.122065
3.	Effect of Spin Orbital Coupling on Antiperovskites: Sr_3BO (B= Pb, Sn). **Tavneet Kaur*** and M.M. Sinha. Physica Scripta 97 (2022) 045701 http://dx.doi.org/10.1088/1402-4896/ac5857
4.	First principles calculation to investigate Li-based quaternary Heusler compounds LiHfCoX (X=Ge, Sn) for thermoelectric applications. **Tavneet Kaur**, Jaspal Singh*, Megha Goyal, Kulwinder Kaur, Shakeel Ahmad Khandy, Muzzammil Ahmad Bhat, Utkir Bahodirovich Sharopov, Shobhna Dhiman, Aadil FayazWani, Bindu Rani, M. M. Sinha and S. S. Verma. Physica Scripta 97 (2022) 105706 http://dx.doi.org/10.1088/1402-4896/ac8c70
5.	First-principle study of structural, electronic, thermoelectric and vibrational properties of Co_2 -based Weyl semimetal VCo_2Al. **Tavneet Kaur*** and M. M. Sinha. Bulletin of Materials Science 44(1) (2021), 1-8 https://doi.org/10.1007/s12034-020-02305-1
6.	LiNbCoX (X = Al, Ga) quaternary Heusler compounds for high-temperature thermoelectric properties: a computational approach. Jaspal Singh, **Tavneet Kaur***, Amrit Pal Singh, Megha Goyal, Kulwinder Kaur, Shakeel Ahmad Khandy, Ishtihadah Islam, Ram Krishan, M.M. Sinha and SS Verma. Bulletin of Materials Science 46, 103 (2023), https://doi.org/10.1007/s12034-023-02945-z
7.	Electronic structure, phonon stability, mechanical and high-temperature thermoelectric properties of Li-based quaternary Heusler alloys. Jaspal Singh, Kulwinder Kaur, Ishtihadah Islam, Jan Mohammad Mir, Megha Goyal, **Tavneet Kaur**, SS Verma Atif Ali and Shakeel Ahmad Khandy*. Current Applied Physics 50, (2023) 161-167 https://doi.org/10.1016/j.cap.2023.04.010
8.	An ab initio investigation of electronic, elastic, mechanical and vibrational properties of Co_2VX (X = Al, Ga). **Tavneet Kaur**, Amrit Pal Singh*, Jaspal Singh, M.M. Sinha, Materials Today Proceedings (2023) ISSN 2214-7853. https://doi.org/10.1016/j.matpr.2023.02.085.
9.	Exploring structural, electronic, phonon, mechanical, elastic, thermodynamic, and thermoelectric properties of the Li based quaternary Heusler LiTaCoAl by DFT: A multifunctional smart material. Jaspal Singh, **Tavneet Kaur***, Megha Goyal, Kulwinder Kaur, S.S. Verma, M.M. Sinha. Materials Today: Proceedings (2023) ISSN 2214-7853. https://doi.org/10.1016/j.matpr.2023.01.364

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10.	Probing thermoelectric properties of high potential Ca_3PbO: An Ab Initio Study **Tavneet Kaur*** and M. M. Sinha. IOP Conference Series: Materials Science and Engineering 1033 (2021) 012080. https://doi:10.1088/1757-899X/1033/1/012080

Experience:

Teaching	5.5 Months
Industry	-
Research	-
Total Experience	5.5 Months