


Title	Dr.	First Name	B.S.	Last Name	Tewari	
Designation		Associate Professor				
Dept.Name		Applied Sciences and Humanities				
Address:		D-2, Residential complex, GBPIET Ghurdauri Pauri Garhwal, Uttarakhand				
Phone No.		9412943667				
Email		bhagyasindhu@gmail.com		bstewari@gbpec.ac.in		
WebPage(if any)						
Subjects Taught		Engineering Physics				
Areas of Interest/Specialization		Condensed Matter Physics, Nanoscience and Nanotechnology				
Experience(inyears)		Total	16			
		Industry	0			
		Teaching	14			
		Research	02			
Educational Qualifications		UG	<b>B.Sc. (Physics, Chemistry and Mathematics)</b> (2002): Kumaun University, Nainital, India			
		PG	<b>M.Sc. (Physics)</b> (2004): G.B. Pant University of Ag.& Technology Pantnagar India			
		Doctorate	<b>Ph.D. ( Major-Physics and Minor- Computer Science)</b> (2008): G.B. Pant University of Ag. & Technology Pantnagar India.			
		Anyother	<b>UGC CSIR NET</b> qualified in Physical Sciences (AIR 11) and <b>JEST</b> qualified in Physics (AIR 236) in 2006. <b>Advance Graduate Course (Statistical and Condensed Matter Physics)</b> -(2008) from Indian Institute of Science, Banglore India.			
Research Publications in Journals		<p>1. B.S. Tewari, Ajay and R. Kishore Influence of three site exchange interaction on the spectral properties of layered high T<sub>c</sub> cuprate superconductors; Physica C 468, 237 (2008)</p> <p>2. B.S. Tewari, A. Dhyani and Ajay Influence of inter cell resonant tunneling on the out-of-plane electronic transport behavior in layered high T<sub>c</sub> cuprates; Eur. Phys. J. B 66, 67 (2008)</p> <p>3. A. Dhyani, B.S. Tewari, Ajay Study of the Josephson Supercurrent through Nanoscopic Superconducting-Quantum Dot Tunnel Junction; Physica E 41, 1179 (2009).</p>				

4. A. Dhyani, B.S. Tewari and Ajay  
Interplay of the single particle and Josephson Cooper pair tunneling on supercurrent across the superconducting quantum dot junction, *Physica E* 42, 162 (2009)
5. Ajay, B.S. Tewari and Govind  
Influence of Intra and inter unit cell couplings on the electronic spectra in bilayer high T<sub>c</sub> cuprates; *Journal of Modern Physics*, 2, 759 (2011).
6. B.S. Tewari, A. Dhyani, S.K. Joshi K.Pandey and S. Dubey,  
Study of magnetic property of Sn doped Ni-Zn-Fe nanoparticles; *Conference Papers in Science*, vol. 2014, Article ID 816970, 5 pages, 2014. doi:10.1155/2014/816970.
7. Santosh Dubey, B.S. Tewari and S.K. Joshi,  
On the Issue of Radiation-Induced Instability in Binary Solid Solutions; *Conference Papers in Science*, vol. 2014, Article ID 849241, 5 pages, 2014. doi:10.1155/2014/849241.
8. S. K. Joshi, B. S. Tewari, Rajeev Gupta and Santosh Dubey,  
Opto-Thermal Characterisation of Neodymium -doped Zinc Phosphate Glasse; *International Journal of Science, Technology & Management*, 4, 1 (2015).
9. A. Dhyani, Rajendra Kumar, B.S. Tewari, Ajay  
Tunable Josephson supercurrent through a two level quantum dot superconductor tunnel junction; *Journal of Computational Electronics*, 14, 139 (2015)
10. A. Dhyani, P.S.Rawat, B.S. Tewari,  
Spectral density of Cooper pairs in two level quantum dot–superconductors Josephson junction; *Physica C* 528, 1 (2016).
11. A. Dhyani, P. Dua, A.K. Chawla and B.S. Tewari,  
Effect of Coulomb Blockade on Josephson Super Current Across Superconductor/Quantum Dot/Superconductor Nano Junction; *JAST* 8(2), 9 (2018).
12. H. Gangwar, V. Singh, B. S. Tewari, H. Gupta, L.P.Purohit  
Study of zinc doped tellurite glasses using XRD, UV-Vis and FTIR; *Materials Today: Proc.* 17, 329 (2019).
13. B.S. Tewari, M. Tewari, A.Dhyani, Ajay  
Study of inter-band pair transfer and density of states on isotope effect in TTF[Ni(dmit)<sub>2</sub>]<sub>2</sub> organic superconductor; *Physica C* 571, 1353591 (2019).
14. A.Dhyani, P. Mandal, P.S. Rawat, B.S. Tewari  
Electronic and Cooper pair tunneling signatures in the electronic spectra of superconductors coupled to quantum dot nano-junction: *Physica C* 571, 1353673 (2020). IF -1.534
15. P. Mandal, B.S. Tewari  
Near-Field Manipulation And Metallic Cavity Assisted High Surface Enhanced

	<p>Raman Scattering Detection: AIP Conference proceeding 2265, 30689 (2020).</p> <p>16. M. Kumar, M.S. Goyat, R. Chandra, R.K. Tiwari, B.S. Tewari Influence of SiC thin films thickness on the electrical properties of Pd/SiC thin films for hydrogen gas sensor; Vacuum 182, 109750 (2020).</p> <p>17. B.S. Tewari, M. Ahlawat, A.Dhyani, Ajay Influence of interlayer coupling and pseudo gap on isotope effect in high <math>T_c</math> layered cuprate superconductors; Physica C 587, 1353895 (2021).</p> <p>18. B.S. Tewari, P.Mandal, and A. Dhyani Optical transmission through MDM plasmonic tri-layer consisting of T and L shape periodic structures; Journal of Taibah University for Science, 15(1), 530 (2021).</p> <p>19. P.Mandal and B.S. Tewari Progress in surface enhanced Raman scattering molecular sensing: a review; Surface and interfaces, 28, 101655 (2022).</p> <p>20. H. Kaur, K.S. Bhatia, B.S. Tewari, P. Mandal and A. Dhyani Influence of Co-In doping in M-Type Barium- Strontium hexagonal ferrite on microwave absorption; Journal of Electronic Materials, 51 (8), 4152 (2022).</p> <p>21. M.S. Goyat, S. Sharma, S. Das, B.S. Tewari, , M. Kumar, T.K. Gupta Assessing thermo-mechanical and wetting properties of epoxy/SBA-15 nanocomposite; (Journal of Materials Science 2022- <a href="https://doi.org/10.1007/s10853-022-07769-6">https://doi.org/10.1007/s10853-022-07769-6</a>).</p>
<p>Papers Presented/Published in Conference Proceedings</p>	<p>1. Ajay, B.S. Tewari, Govind and S.K. Joshi, Electronic spectra of bilayer high <math>T_c</math> cuprates: role of intra and interunit cell couplings, Presented at International Workshop on the Physics of Mesoscopic and Disordered Materials (MESODIS), held at , Physics Department IIT-Kanpur, Dec. 04-08 (2006)</p> <p>2. M.P. Singh, B.S. Tewari and Ajay, Temperature and carrier density dependence of anisotropy in supercurrent density in layered cuprate superconductors, Presented at 51-th DAE, Solid State Physics Symposium held at Barktullah University, Bhopal, during 26-30 Dec. (2006)</p> <p>3. P.K. Pathak, B.S. Tewari, Ajay and R. Kishore, Pseudogap in the electronic spectra of doped high <math>T_c</math> cuprate in normal state, Oral presentation in International Conference on Condensed Matter Physics (ICCMP-2007) held at University of Rajasthan, during 25-28 Nov. (2007)</p> <p>4. B.S. Tewari, Ajay and S.K. Joshi, Influence of long range hoppings and three site exchange interaction on the electronic spectra of bilayer cuprate Superconductors: presented (poster) at Summer School on “From BCS to Exotic Superconductivity” , held at Cargese, France, during July 16 to 28, (2007)</p> <p>5. Archana Dhyani, B.S. Tewari, and Ajay Electronic Transport Behaviour through Nanoscopic Superconducting Quantum</p>

Dot Josephson Junction, presented (poster) in School on “Low Dimensional Nanoscopic Physics” held at Harish Chandra Research Institute, Allahabad, during 28 Jan to 09 Feb (2008).

6. B.S. Tewari

“Influence of the third dimension on the electronic spectra and out-of-plane transport behaviour in bilayered high  $T_c$  cuprates in normal state”, Presented thesis under the category of Best Thesis Award at 53-rd DAE, Solid State Physics Symposium held at BARC, Mumbai during 16-20 Dec. (2008)

7. Archana Dhyani, B.S. Tewari and Ajay

Electronic Structure and Quantum Transport in nanoscale Superconducting quantum Dot junction, presented and awarded “Best Presentation Award” at “National Symposium on nanoscale Science and Technology”, held at Maharaj Singh College Saharanpur, during Feb 21-22, (2009)

8. Archana Dhyani, B.S. Tewari and Ajay,

Role of Josephson Cooper pair tunneling on S-Qd-S junction, Presented at 54-th DAE, Solid State Physics Symposium held at M.S. University of Baroda, Vadodara, during 14-18 Dec. (2009)

9. Ajay, B.S. Tewari and Govind

Influence of Intra and inter unit cell couplings on the electronic spectra in bilayer high  $T_c$  cuprates, Presented at International conference on Superconductivity and Magnetism (ICSM-2010) held at Antalya, Turkey, during 25-30 April (2010)

10. A. Dhyani, B.S. Tewari and Ajay

Study of Josephson supercurrent across a correlated Quantum dot coupled to s - wave superconducting leads, Presented at “SCES 2011 - Commemorating 100 Years of Superconductivity” held at University of Cambridge, London, UK, during 29 Aug - 03 September (2011).

11. B.S. Tewari and A. Dhyani

Josephson supercurrent across S-QD-S junction, Presented at “CECAM workshop “Graphene: From band structure to many body physics” held at University of Bremen, Bremen, Germany, during 03 - 07 September (2012)

12. A. Dhyani, B.S. Tewari and Kailash Pandey

Josephson Supercurrent through double level –Quantum dot, in 8 Uttarakhand State Science and Technology conference-2013 held at Doon University, Dehradun during 26-28 Dec 2013.

13. Kailash Pandey, A. Dhyani, B.S. Tewari and Piyush Kuchhal

Fission Barrier Height Determination of Actinides Nuclei, in 8 Uttarakhand State Science and Technology conference-2013 held at Doon University, Dehradun during 26-28 Dec 2013.

14. Manish Dubey, N.A. Siddhqui and B.S. Tewari

Health Risk assessment of mobile tower radiation in India, in 8 Uttarakhand State Science and Technology conference-2013 held at Doon University, Dehradun during 26-28 Dec 2013.

15. B.S. Tewari, S.K. Joshi and A.Dhyani

Spectral density and Josephson current through two level quantum dot junction coupled to superconducting leads. in National conference on condensed matter physics and applications held at MIT, Manipal during 27-28 March 2015.

16. Santosh Dubey, S.K. Joshi and B.S. Tewari  
Temporal Stiffness in Metallic Alloys under irradiation. in CONIAPS XIX held at Kumaun University, Nainital during 17-19 Nov 2016.

17. A.K.Chawla, B.S. Tewari and Sudesh Sharma  
Annealing effect on the Optical Properties of Nano-crystalline Silver films. in International conference on Nano for Energy and Water & Indo French Workshop on Water Networking at UPES, Dehradun during 12-24 Feb 2017.

18. Harshita Gangwar, Virendra Singh, B. S. Tewari, H. Gupta, L.P. Purohit  
Study of zinc doped tellurite glasses using XRD, UV-Vis and FTIR. in International Conference on Advanced Materials Energy & Environmental sustainability.at UPES, Dehradun during 14-15 Dec 2018.

19 P. Mandal, B.S. Tewari  
Near-Field Manipulation And Metallic Cavity Assisted High Surface Enhanced Raman Scattering Detection. in 64<sup>th</sup> DAE Solid State Physics Symposium at IIT Jodhpur during 18-22 Dec 2019.

20. A. Dhyani, P Mandal, P S Rawat, B S Tewari  
Electronic spectra of superconducting quantum dot junction: Role of electron and Cooper pair tunneling. in 64<sup>th</sup> DAE Solid State Physics Symposium at IIT Jodhpur during 18-22 Dec 2019.

21. B.S. Tewari and K.Semwal  
Electronic spectra of correlated quantum dot coupled to BCS superconductors, in 15<sup>th</sup> Uttarakhand State Science and Technology conference-2022 held at Graphic Era University, Dehradun during 22-24 June 2022.

Books Authored /Book Volume Chapters	S.N.	Title with page no.	Book/ Chapter	Book Publisher	Publication Year	National Internat publish
	1	Study of Sn doped Ni-Zn ferrites	Book	LAP Germany	2012	Internat
	2	Plane, Circularly and Elliptically polarized light (217-233)	Book Chapter (Optics)	Uttarakhand Open University, Haldwani, Uttarakhand	2018	Nation
	3	Optical activity (234-250)	Book Chapter (Optics)	Uttarakhand Open University, Haldwani, Uttarakhand	2018	Nation
	4	Four-Vector formalism of Maxwell's Equations	Book Chapter (Electrodynamics)	Uttarakhand Open University, Haldwani, Uttarakhand	2022	Nation

	5	M- Type hexagonal ferrite for microwave absorption applications	Book Chapter (Ferrite nanostructured magnetic materials)	Elsevier	2022	Interna
	6	Quantum information processes: Role of quantum logic gates	Book Chapter (AI, machine learning and blockchain in quantum satellite, Drone and Network)	CRC press	2022	Interna
	7	Quantum computation and its application satellite image processing	Book Chapter (AI, machine learning and blockchain in quantum satellite, Drone and Network)	CRC press	2022	Interna
No.of Conferences	National		Attended		Organized	
			06		01	
	International		10		02	
Research Guidance	Awarded		PG		Doctorate	
	Undergoing					
Research Projects	Completed					
	Undergoing					
Awards & Distinctions	<ol style="list-style-type: none"> <li>1. Recipient of “<b>Him Jyoti Scholarship</b>” from Governor of Uttarakhand during 2003-04.</li> <li>2. Recipient of “<b>Junior Research Fellowship</b>” from Department of Science Technology (DST), New Delhi during Aug 05, 2005 to March 31, 2007.</li> <li>3. Recipient of “<b>International Travel Award</b>” from University of California, Davis USA to participate in Cargese Summer School organized by University of Paris –Sud, Orsay France</li> <li>4. Ph.D. thesis is selected for “<b>Best Thesis Award</b>” category at 53-rd DAE, SSPS held at Bhabha Atomic Research Centre, Mumbai during 16-20 Dec. 2008.</li> <li>5. Recipient of “<b>International Travel Award</b>” support from Department of Science Technology (DST), New Delhi to participate in a workshop held at</li> </ol>					

	<p>University of Bremen Germany during Sep 2012.</p> <p>6. Recipient of “<b>Teacher of the year 2021</b>” award at Uttarakhand Technical University, Dehradun by Chief Minister of Uttarakhand on 05 Sep 2021.</p> <p>7. Recipient of “<b>Young Scientist Award-2022</b>” in 15<sup>th</sup> Uttarakhand State Science and Technology Congress on 24 June 2022 in Physics discipline.</p>
Administrative Assignments Handled	<ul style="list-style-type: none"> <li>➤ Wing Counselor of Chitranjan Bhawan II during 2003-04 at G B Pant University, Pantnagar.</li> <li>➤ Captain Table-Tennis in Chitranjan Bhawan II during 2003-04 at G B Pant University, Pantnagar.</li> <li>➤ Captain Badminton in Shastri Bhawan during 2005-06 at G B Pant University, Pantnagar.</li> <li>➤ Lab in-charge of Physics Lab during session 2010-11 at UPES Dehradun</li> <li>➤ Course coordinator for B.Tech GSE II year from July 01, 2011 to June 30, 2012 at UPES .</li> <li>➤ Course coordinator for B.Tech FSE I year from July 01, 2012 to June 30, 2015 at UPES.</li> <li>➤ Organized Science- Olympiad for B.Tech students for session 2015-16 at UPES Dehradun.</li> <li>➤ Organized Science- Engineering connect for B.Tech students for session 2016-17 at UPES Dehradun.</li> <li>➤ Organized PHYSIC-O-PEDIA under IGNITE, a technical festival held at UPES Dehradun during 2017-18.</li> <li>➤ Group Head for Engineering Branches at Physics department at UPES Dehradun from July 2015 to 2019.</li> </ul>
Association with Professional Bodies	IEEE Member (2020)
Any other Achievements	<ul style="list-style-type: none"> <li>➤ External resource person for BOS meeting of Applied science at BTKIT Dwarahat (2017).</li> <li>➤ Delivered an expert talk as resource person in Virtual Workshop on “Lectures and Virtual Practical Demonstration”, organized by Department of Physics, School of Sciences, Uttarakhand Open University, Haldwani (Nainital), Uttarakhand, India during 07- 19 July 2020.</li> <li>➤ External resource person for BOS meeting of Applied Science at BTKIT Dwarahat (2020).</li> <li>➤ Expert member of the selection committee for JRF in DST-SERB funded project at UPES on 20 June 2020.</li> <li>➤ Delivered an expert talk as resource person in FDP on “Advantages of New education policy in the Indian context”, organized by Department of Applied Sciences, BTKIT Uttarakhand, India during 21-25 Oct 2020.</li> <li>➤ External expert for Departmental Consultative Committee meeting of Applied Sciences at University of Petroleum and Energy Studies, Dehradun on 29 September 2021.</li> <li>➤ Expert member in Sub-Committee of Academic Council meeting at University of Petroleum and Energy Studies, Dehradun held on 06 October, 2021.</li> <li>➤ External expert for Cluster Consultative Committee meeting of Applied Sciences at University of Petroleum and Energy Studies, Dehradun on 08 March 2022.</li> </ul>

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>➤ Expert member in Sub-Committee of Academic Council meeting at University of Petroleum and Energy Studies, Dehradun held on 20 April, 2022.</li><li>➤ Member of Board of Studies (Applied Sciences) at Uttarakhand Technical University, Dehradun held on 24 August 2022.</li><li>➤ External examiner to conduct Thesis viva-voca of MS students at G.B.Pant University, Pantnagar, India.</li><li>➤ Editor for “Current Trend in Applied Sciences” a research plateau publication house journal.</li></ul> |
|--|--|