



JSS Mahavidyapeetha

JSS Academy of Technical Education

Dr. Vishnuvardhan Road, Srinivasapura post Bangalore 560060

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FACULTY PROFILE

Department: Physics

1. Personal Details

NAME	Dr.Abhilasha Singh	
DEPARTMENT	Physics	
DESIGNATION	Assistant Professor	
PHONE	+91-8980044760	
EMAIL ID	abhilashasingh@jssateb.ac.in	
Date of Joining (JSSATEB)	05/11/2016	

2. Experience

Total Experience in Years	Teaching: 10.8 Years	Industry: Nil	Research: 7 Years
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3. Qualifications

COURSES	SPECIALIZATION	Year of Award	INSTITUTION	UNIVERSITY
B.Sc.	Physics Honours	2003	Banaras Hindu University	Banaras Hindu University
M.Sc.	Nuclear Physics	2005	Banaras Hindu University	Banaras Hindu University
Ph.D.	Condensed Matter Physics (Liquid Crystals)	2011	Banaras Hindu University	Banaras Hindu University
Post Doc.	---			

4. Research & Publications

Papers Published in Web of Science indexed Journals	International: 15	National: 00
Papers Published in SCOPUS indexed Journals	International: 15	National: 00

Papers Published in other Journals	International: 00	National: 00
Papers Presented in Conferences / Symposium	International: 00	National: 00
Books / Book chapters Published	Name of the book: Futuristic Trends in Physical Sciences Publisher: IIP Proceedings Year of Publication: August, 2022	

5. Research Guidance

PhD Guide? Give field & University	Yes, Liquid Crystal	University: a. Visvesvaraya Technological University, Belagavi,
PhDs / Projects Guided	Nil	Projects at Master's Level: Nil Projects at Bachelor's Level: Nil

6. Grants

- i. Funds Received (Projects) : Nil
- ii. Patents: Nil
- iii. Consultancy: Nil

7. Awards Received: Nil

8. Publications

i. International Journals

Sl. No.	Title of the paper	Name(s) of Author(s)	Name of the Journal	Volume No. Issue No. Year	WOS / Scopus / Both	Impact Factor	Publisher
1	Application of thermodynamic model to study the electro-optical and structural properties of ferroelectric liquid crystal W-212	Abhilasha Singh and Shri Singh	Phase Transitions	Vol. No. 98 Issue No. 6-7 pp: 432-440 Year: 2025	Both	1.53	Taylor and Francis
2	Thermodynamic model for electro-optical properties of antiferroelectric phase in mesogen W-330-3 and W-331-3	Abhilasha Singh	Soft Materials	Vol. No. 22 Issue No. 3 pp: 192-198 Year: 2024	Both	1.33	Taylor and Francis
3	Investigation of electro-optical and dielectric properties of pure and dispersed nematic liquid-crystal	Sadhna Tiwari, Saransh Saxena, Shivangi Tripathi, Govind Pathak, Abhilasha Singh, Sandeep Kumar and Rajiv Manohar	Liquid Crystals	Vol. No. 51 Issue No. 12 pp: 1969-1979 Year: 2024	Both	2.3	Taylor and Francis

4	Thermodynamic model to study the structural and electro-optical properties of chiral antiferroelectric smectic C phase exhibited by mesogenic homologous series 3FnHBM6(s) and W-316 mixture	Abhilasha Singh, Ayushi Rastogi and Shri Singh	Phase Transitions	Vol. No. 96 Issue No. 11-12 pp: 720-730 Year: 2023	Both	1.53	Taylor and Francis
5	A systemic review on liquid crystals, nanoformulations and its application for detection and treatment of SARS - CoV- 2 (COVID-19)	Ayushi Rastogi, Abhilasha Singh , Kaustubh Naik, Archana Mishra and Shilpi Chaudhary, Rajeev Manohar and Avanish Singh Parmar	Journal of Molecular Liquids	Vol. No. 362 pp: 119795 Year: 2022	Both	5.79	Elsevier
6	Thermodynamic model to study the ferroelectric behaviour of lactic acid derivatives with keto linkage group	Abhilasha Singh , Shashidhar R and Ayushi Rastogi	Phase Transitions	Vol. No. 96 Issue No. 10 pp: 698-706 Year: 2022	Both	1.53	Taylor and Francis
7	Thermodynamic Model to Study the Phase Transition Properties of Sm CA* Phase in Antiferroelectric Mesogen W- 358 Series	Abhilasha Singh , Ayushi Rastogi, Shashidhar R and Sudhaker Dixit	Indian Journal of Pure & Applied Physics	Vol. No. 60 Issue No. 8 pp: 695-699 Year: 2022	Both	1.10	NISPR
8	Phase transition properties of ferroelectric and antiferroelectric liquid crystals	Abhilasha Singh and Pankaj Kumar Tripathi	Journal of Philosophical Magazine	Vol. No. 101 Issue No. 12 pp: 1490-1509 Year: 2021	Both	1.855	Taylor and Francis
9	Application of thermodynamic model to study the ferroelectric properties of biphenyl alkyloxy benzoate homologous series of SSFLC	Shubha Singh, Shubham Mishra, Abhilasha Singh and Shri Singh	Phase Transitions	Vol. No. 92 Issue No. 9 pp: 816-823 Year: 2019	Both	1.53	Taylor and Francis
10	Electro-optic switching and memory effect in suspension of ferroelectric liquid crystal and iron oxide nanoparticles	Abhishek Kumar Misra, Pankaj Kumar Tripathi, Kamal Kumar Pandey, Fanindra Pati Pandey, Shri Singh and Abhilasha Singh	Materials Research Express	Vol. No. 6 Issue No. 10 pp: 1050d2 Year: 2019	Both	2.47	IOP

11	Thermodynamic model for the electro-optical and structural properties of Sm CA* phase in antiferroelectric liquid crystal MHPOBC	Abhilasha Singh and Shri Singh	Journal of Materials Chemistry	Vol. No. 21 Issue No. 6 pp:1991-1996 Year:2011	Both	5.20	Royal Society of Chemistry
12	Thermodynamic model for the description of smectic C* and smectic A – smectic C* phase transition Properties	Abhilasha Singh and Shri Singh	Phase Transitions	Vol. No.83 Issue No.3 pp:205-222 Year:2010	Both	1.53	Taylor and Francis
13	Effect of pressure on spontaneous polarization and tilt angle in ferroelectric liquid crystal DOBAMBC	Abhilasha Singh and Shri Singh	International Journal of Modern Physics B	Vol. No.23 Issue No.8 pp:2139-2148 Year:2009	Both	3.41	World Scientific
14	Application of a Generalized thermodynamic model to study of the ferroelectric properties of DOBAMBC and DOBA-1-MPC	Abhilasha Singh and Shri Singh	Liquid Crystals	Vol. No. 35 Issue No. 6 pp: 727-736 Year: 2008	Both	2.3	Taylor and Francis
15	Phase transitions in ferroelectric liquid crystals	Shri Singh, Avanish Singh Parmar and Abhilasha Singh	Phase Transitions	Vol. No. 81 Issue No. 9 pp: 815-855 Year: 2008	Both	1.53	Taylor and Francis

ii. National Journals: Nil

iii. Conferences: Nil

iv. Workshops /Conferences Attended

Sl. No.	Name of the workshop / Conference	Organiser	Date
1	FDP on “Quantum Frontiers- Materials, Modelling and Computing”	Department of Physics and AIML, Ramaiah Institute of Technology, Bengaluru	8-12 th September, 2025
2	5 days online FDP on “Applied Physics in VTU Curriculum”	Department of Physics, Cambridge Institute of Technology, Bengaluru	15-19 th May, 2023
3	3 days online FDP on “Quantum Computing”	Department of Computer Science and Engineering, VidyaVardhaka College of Engineering, Mysore, karnataka	25-27 th July, 2021
4	International Conference on Recent Trends in Material Science	Department of Physics, Krishtu Jayanti College, Bengaluru	3-4 th April, 2025

5	National Conference on Liquid Crystals (NCLC 2018)	Centre of Materials Science, University of Allahabad, Uttar Pradesh	19-21 st December 2018
6	28th National Conference on liquid crystals	Department of Chemistry, Assam University, Silchar, Assam in association with Indian Liquid Crystal Society, Bangalore	21 st -23 rd December 2021 (Oral)

v. Workshops / Conference (Organised): Nil

vi. Conference Attended (those sponsored by AICTE / ISTE /IETE /TEQIP or any other sponsoring body)

Sl. No.	Name of the workshop / Conference	Organiser	Date
1	International e-Conference on "Applied Materials and Technology-2020"	Department of Physics, KLE Society's S Nijalingappa College, Bengaluru, Karnataka	9-10 th October, 2020

1	FDP on ""Inculcating Universal Human Values in Technical Education""	AICTE	26-30 th September, 2022
2	FDP on "Smart Materials and Their Emerging Technologies (SMET-2019)	Department of Physics, BMS Institute of Technology and Management, Bengaluru, Karnataka	26-31 st July, 2019

9. Details of NPTEL / COURSERA courses completed

Sl. No.	Name of the subject	Organized by	Date of completion / Award	Grade / Marks
1	Solid State Physics	NPTEL	October 2021	76%
2	Solar Photovoltaics Fundamentals, Technology and Applications	NPTEL	December 2020	86%
3	Semiconductor Physics	Coursera	27.05.2020	88%
4	Numerical Methods And Simulation Techniques For Scientists And Engineers	NPTEL	17.06.2020	64%

10. Membership of Professional Bodies: Nil

11. Any other information you will like to share about your professional experience

Dr Abhilasha Singh
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