

Dr. SANDEEP KUMAR SHARMA

Assistant Professor

Department of Physics
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DOB: September 1, 1987



Educational Qualifications

Ph.D. in Physics

Department of Physics, Desh Bhagat University, Mandi Gobindgarh, Punjab with research work done at CSIR-CSIO, Chandigarh

Ph.D. Supervisor: Dr. AK Paul, Co-advisor: Dr Akash Deep, Scientist CSIO, Chandigarh

M.Tech (Microelectronics) U.I.E.T, Panjab University, Chandigarh India (2010-2012, • Qualified GATE- EC 2010)

M.Sc. (Physics & Electronics) - Department of Physics, Panjab University, Chandigarh India (2008-2010)

B.Ed. (Physical Sciences and Mathematics) Govt. College, Daultpur (H. P University, Shimla).

B.Sc. -J. C. D. A. V College, Dasuya, Punjab India (2004-2007)

Teaching/Research Experience

- March 11, 2024 - till date
Assistant Professor in Department of Physics, GGDSD College, Chandigarh
- August, 2013 to February, 2024
Assistant Professor (Physics) at S. G. G. S. College, Chandigarh on contractual basis.

Areas of Interest

- Material Science

Publications (Journal/Book Chapters)

Journal Publications:

U. Sharma, S. Sanjta, and S. K. Sharma, Nanopesticides: An approach towards precision insect-pest management in agriculture, *Journal of Entomological Research* 47 (2): 288-294, 2023

P. Malik, S. Kumar, N. Khushboo, A. Upmanyu, P. Kumar, and P. Malik Thermo-acoustical studies of zinc oxide nano particles dispersed nematic liquid crystals mixtures in the temperatures range 283.15 K-318.15K, *Liquid crystals*, 2022

A. Gupta, S. K. Sharma, A. L. Sharma, and A. Deep, Functionalized Graphene Oxide-Modified Screen-Printed Electrodes for Sensitive Electrochemical Detection of Cardiac Marker Troponin I, *Physica status solidi: applications and material science*, 2021

A. Gupta, S.K. Sharma et al, RSC Advances Sensitive impedimetric detection of troponin I with metal-organic framework composite electrode, *RSC Advances*, Vol. 11, 2167, 2021

P. Malik, S. Kumar, N. Khushboo, A. Upmanyu, P. Kumar, and P. Malik Studies on Lead-Free Multiferroic Magnetolectric Composites, *AIP Conference Proceedings*, 2451, 020080, 2022

S.K. Sharma, Review on fabrication and utilization of Dye-sensitized solar cells, *Kala sarovar*, 2021

S.K. Sharma, Enhancement in the photovoltaic efficiency of DSSC using Metal-Organic Frameworks: a Review , 6: 2593-2604 *Design Engineering*, 2021

S. K. Sharma, K. Kumar, and A. K. Paul, Synthesis and solar cell application of a Ti (metal)-organic framework/carbon nanotube composite, *Materials Research Express* Vol. 6(12): 125050: 1-8, 2019

S. K. Sharma, R. Singh, and T. D. Kuhne, Vibrational spectra of hydrogenated and halogenated graphene CX; X = H, F, Cl. *Materials Research Express*, Vol. 6:045612: 1-8, 2019

S. K. Sharma, H. Kaur, K. Kumar, M. Tyagi, and A. Deep Synthesis and solar cell application of a composite of Eu-BTB MOF with functionalized graphene. *Materials Research Express* Vol 5: 125501: 1-8, 2018

S. K. Sharma, Length Based Separations of Single Wall Carbon Nano Tubes Using Liquid-Liquid Extraction with CYANEX 923, 4(12), 82-91, 2017

Books:

SK Sharma. Digital Electronics UNIMAX Publications, Jalandhar-India ISBN: 978-93-83730-99-5, 2021

SK Sharma and S Sharma, Engineering Physics, Business Press India in association with M/S Novatech Scientifics and Informatics 1/6850, East Rohitash Nagar, Shahdara, Delhi, India, 2018.

Book Chapters:

SK Sharma, S Kumar and A Deep. Metal-organic frameworks in Photovoltaics In: Deliberations on Advances in Physical, Mathematical and Computational Sciences, Shree Vinayak Publication, Agra (UP)-India ISBN: 978-93-87899-092, pp 172-196, 2020

R Kaur, SK Sharma and SK Tripathy. Advances and Limitations of Environmental and Nanosensors In Advances in Nanosensors for Biological and Environmental Analysis-1st Edition, Mathew Deans, Elsevier, ISBN: 978-0-12-817456, 2019

Patent:

Design No. 411536-001 dated 25.03.2024. Exascale computing for large-scale scientific simulations (Punit Puri, Sushil Kumar, Subham kapil, Sandeep Kumar Sharma, Pankaj Bagga, Ankush, Ravi Kumar.

Seminars/ Conferences/Symposiums (Paper Presented)

- Paper presented in **2nd National Conference on emerging technologies beyond 2020, organised by UIET, Kurukshetra University, Haryana** (Title of paper: Synthesis and characterization of Graphene-MOF composite for biomedical applications) on 28-29th Nov, 2014.
- Participated in **DBT Sponsored National Seminar on “Recent Advances in Material Science”** held on Feb. 21, 2015 at GGSDS College, Chandigarh
- Presented paper in UGC sponsored one day National Seminar on Cloud Computing held at RR BAWA DAV College for Girls, Batala, Punjab on March 23rd, 2018.
- Paper presented in **National Seminar on “Recent trends in Science and technology”** organized by GTB Khalsa College for women, Dasuya, Punjab on March 7th, 2018.
- Presented paper in third **International Conference on Research Developments in Applied Science, Engineering and Management** held at ICSSR, PU Chandigarh on August 19th, 2018.
- Paper presented in **National Seminar on “Advances in**

Mathematical and Information Services” organized under DBT-sponsored star college scheme at Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, Punjab on Feb 23rd, 2019.

- Presented paper in **5th International Conference on Interdisciplinary Research Innovations in Science and Humanities held at UAE** on dated 11-12th November, 2019.
- Participated in **Online National awareness program on COVID-19 organized by Indian Association of Physics Teachers** on dated 12th May, 2020.
- Presented paper (oral presentation) in Online **International Conference on Advances in Physical, Mathematical and Computational Sciences held and organized by St. Aloysius College, Jabalpur, M.P. India** on dated 12-13th June 2020.
- *Oral presentation in “International Conference on Advances in Multi-Disciplinary Sciences and Engineering Research (ICAMSER-2021), held on 2-3 July, 2021 [A Virtual Conference] at Chitkara University, Himachal Pradesh. (Awarded with the best oral presentation award).*

Refresher Courses/Workshops/ Training Programmes

- Participated in **two days’ workshop on “Experimental Physics”** held on Dec. 14-15, 2013 at Sri Guru Gobind Singh College, Chandigarh.
- Participated in **“Orientation Programme for Academic Counsellors” held at IGNOU Regional Centre, Rajghat, Delhi – 21-22 October, 2016.**
- Participated in **workshop on “Scientific report writing”** organized by Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, Punjab on Feb 22nd, 2019.
- FDP on Innovative approaches in teaching and research organised by Panjab University, Chandigarh (11.03.2019 to 15.03.2019)
- Online FDP on Teaching Pedagogies-Innovative ways organized by Garbs Educational Charitable Trust and Tamilnadu Association of Intellectuals and Faculty (19.06.2020 to 25.06.2020)
- Attended online NEP orientation and sensitization Programme under MMTTP, Ministry of Education, GOI, SRCC, University of Delhi from July 16 to July 26, 2024.

Administrative Experience

- Member of Examination committee at GGSDS college for the session 2024-25.
- Member of Green Campus committee at GGSDS college for the session 2024-25.
- Member of admission committee at GGSDS college for the session 2024-25.
- Member of section committee for basic sciences at GGSDS college for the session 2024-25.
- Member of the organizing committee of the 6th National Conference on Recent Advances in Materials Science (RAMS-2024) organized under BOSONS, GGSDS college, Chandigarh on 16.10.2024
- Assisted the Controller of Examination Office for examination related activities during 2016 at SGGGS College, Chandigarh.
- Served as member of organizing committee (hospitality) in two days’ workshop on “Development of Laboratory Maintenance Skills for the lab staff” organized under RUSA by SGGGS College, Chandigarh during Jan 20-21, 2017.
- Worked as member of organising committee in one day national workshop on ICT tools for educators held on January 11th 2020, organized by IQAC, SGGGS College, Sector 26, Chandigarh.
- Served as Assistant Dean Foreign Students during 2019 at SGGGS College, Chandigarh.
- Served as Organising Secretary on Expert lecture cum interaction session on Akshay Urja Diwas organized under BOSONS, GGSDS college, Chandigarh on 22.08.2024

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