

Suresh Kumar

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ACADEMIC PROFILE:

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- **Ph.D. in Physics** (2013) from Panjab University, Chandigarh, India and Central Scientific Instruments Organisation, Chandigarh, India.
 - **M.Sc. Physics** with first division in 2006 from Panjab University, Chandigarh (India).

AWARDS AND FELLOWSHIPS:

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- Qualified the prestigious UGC-CSIR JRF/NET exam conducted by the Council of Scientific and Industrial Research (CSIR) in June 2007.
 - Qualified the Graduate Aptitude Test in Engineering (GATE) in 2007.
 - Junior Research Fellowship (JRF) at the Central Scientific Instruments Organization (CSIO), Chandigarh, India, from August 13, 2007, to August 12, 2009.
 - Senior Research Fellowship (SRF) at the Central Scientific Instruments Organization (CSIO), Chandigarh, India, from August 13, 2009, to August 2012.
 - Dr. D. S. Kothari Post-Doctoral Fellowship (UGC).

Professional Background

| Designation | Institute name | Duration |
|--------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Post-Doctoral Fellowship | Department of Physics, Indian Institute of Science (IISc), Bangalore (under the guidance of Prof. A. K. Sood) | March 2013 to August 2014 |
| Assistant Professor | UIET, Panjab University, Chandigarh. | 01-01-2015 - (continuing) |

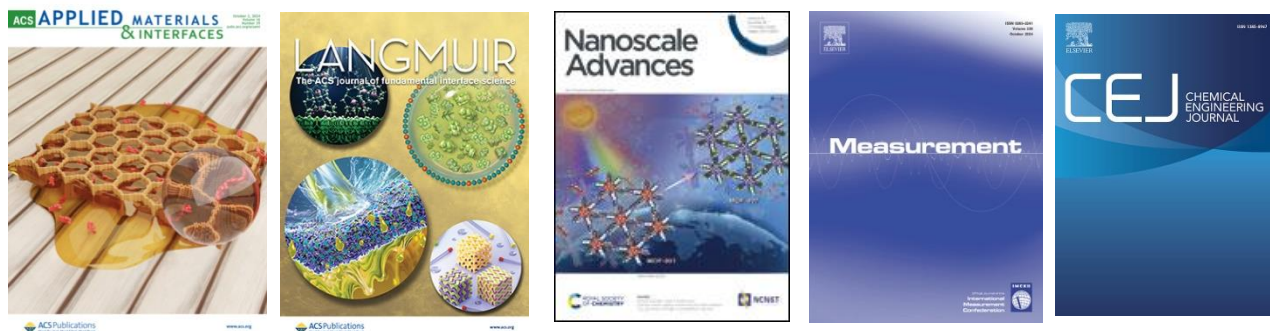
Research Field: Experimental Condensed Matter Physics/Materials science (Physics of nanomaterials).

Research Supervision:

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| Ph. D. Thesis guided | 05 | |
| Master Thesis guided | 05 | |

Research Projects Completed: 02

Selected Publications:



1. Anjali, Twinkle, Rajiv Kashyap, Suresh Kumar and J K Goswamy Microwave assisted reduction of graphene oxide using multiwalled carbon nanotubes for high performance supercapacitor applications, *Physica Scripta*, 99, 105953, 2024.
2. Manpreet Kaur, Priyanka Bhatt , Twinkle, Anjali, Suresh Kumar, and J. K. Gowsamy Graphene silver nanowires hybrid electrode on PET sheet for improved performance transparent electronics, *J Mater Sci: Mater Electron*, 34 , 2287, 2023.
3. Suneev Anil Bansal, Amrinder Pal Singh, Sukhbir Singh, and Suresh Kumar, Bisphenol-A–Carbon Nanotube Nanocomposite: Interfacial DFT Prediction and Experimental Strength Testing, *Langmuir* 39, 1051–1060, 2023.
4. Kalyan Vaid, Jasmeen Dhiman, Suresh Kumar, Vanish Kumar, Citrate and glutathione capped gold nanoparticles for electrochemical immunosensing of atrazine: Effect of conjugation chemistry, *Environmental Research*, 217 , 114855, 2023.
5. Twinkle, Manpreet Kaur, Anjali, Parveen Kumar, Bhanu Prakash, J.K. Gowsamy, Suresh Kumar, Multi-walled carbon nanotubes derived graphene nanoribbons for high performance supercapacitor applications. *Materials Chemistry and Physics*, 296, 127204, 2023.
6. Sonal Rattan, Suresh Kumar, J.K. Goswamy, Gold nanoparticle decorated graphene for efficient sensing of NO₂ gas, *Sensors International*, Volume 3, 100147, 2022.
7. Anjali, Twinkle, Sonal Rattan, Manpreet Kaur, Suresh Kumar & J. K. Goswamy, Synergistic effect of reduced graphene oxide and carbon nanotubes for improved supercapacitive performance electrodes, *Journal of Materials Science: Materials in Electronics*, 33, 6841–6851, (2022).
8. KalyanVaid, Jasmeen Dhiman, Suresh Kumar, Ki-HyunKim, VanishKumar, Mixed metal (cobalt/molybdenum) based metal-organic frameworks for highly sensitive and specific sensing of arsenic (V): Spectroscopic versus paper-based approaches *Chemical Engineering Journal*, Volume 426, 131243, 2021.
9. Suneev AnilBansal, SukhbirSingh, Anurag Srivastava, Amrinder Pal Singh, SureshKumar, Covalent attachment of 2D graphene oxide (GO) sheets with poly allylamine (PAA) for enhanced mechanical performance: Theoretical and experimental study, *Polymer*, Volume 213, 123195, 2021.
10. Suresh Kumar, Twinkle, Manpreet Kaur, Carbon nanotube-derived highly conductive graphene nanoribbons for electronic applications, *Materials Chemistry and Physics*, Volume 259 123967. 2021.
11. Tarun Singla, Amrinder Pal Singh, Suresh Kumar, Gagandeep Singh, Navin Kumar, Characterization of MWCNTs-polystyrene nanocomposite based strain sensor, *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, Volume: 235 issue: 2, 463-469. 2020.

12. Suneev Anil Bansal, Vanish Kumar, Javad Karimi, Amrinder Pal Singh and Suresh Kumar, Role of gold nanoparticles in advanced biomedical applications, *Nanoscale Advances*, 2, 3764, 2020.
13. Twinkle, Manpreet Kaur, J. K. Gowsamy, Parveen Kumar & Suresh Kumar, Synthesis and characterization of CNT/PVDF paper for electronic and energy storage applications, *Emergent Materials*, 3, 181–185, 2020.
14. Suneev Anil Bansal, Amrinder Pal Singh, Suresh Kumar. High strain rate behavior of epoxy graphene oxide nano-composites. *International Journal of Applied Mechanics*, Vol. 10, No. 07, 1850072, 2018.
15. Sonal Rattan, Suresh Kumar and J K Goswamy, In-situ one pot synthesis of graphene-ZnO nanohybrid and its application to UV light detection, *Materials Research Express*, 7, 015058, 2020. VaibhavKhurana, ManpreetKaur, SureshKumar, DiptiGupta, J.K.Goswamy.
16. Multifunctional graphitic tracks on flexible polymer sheet as strain, acoustic vibration and human motion sensor. *Measurement*, Volume 146, 9-14, 2019.
17. Vanish Kumar, Suresh Kumar, Ki-HyunKim, Daniel, C.W. Tsang, Sang, Metal organic frameworks as potent treatment media for odorants and volatiles. *Environmental Research*, 168, 336-356, 2018.
18. Suneev Anil Bansal, Amrinder Pal Singh, Suresh Kumar. Synergistic effect of graphene and carbon nanotubes on mechanical and thermal performance of polystyrene. *Mater. Res. Express*, 5, 75602, 2018.
19. SA Bansal, AP Singh, A Kumar, S Kumar, N Kumar, JK Goswamy. Improved mechanical performance of bisphenol-A graphene-oxide *Journal of Composite Materials*. 52(16), 2179-2188, 2018.
20. Suneev Anil Bansal, Suresh Kumar, Amrinder Pal Singh. 2D materials: Graphene and others, *AIP Conference Proceedings*, 1728, 020459-020459, 2016.
21. Vanish Kumar, Aditi Chopra, Shweta Arora, S. Yadav S, Suresh Kumar, Inderpreet Kaur, Amperometri c sensing of urea using edge activated Graphene Nanoplatelets, *RSC Adv.*, 5, 13278, 2015.
22. Suresh Kumar, R. R Nair, P.B. Pillai, S. N. Gupta, M. A. R. Iyengar, A. K. Sood, Graphene Oxide–MnFe₂O₄ Magnetic Nanohybrids for Efficient Removal of Lead and Arsenic from Water. *ACS Appl. Mater. Interfaces* 6 (20) 17426-17436 2014.
23. Suresh Kumar, Harsimran Kaur, Harkiran Kaur, Inderpreet Kaur, Keya Dharamvir, L. M. Bharadwaj, Magnetic field-guided orientation of carbon nanotubes through their Conjugation with magnetic nanoparticles, *Journal of Mater. Sci.*, 47, 1489, 2012.
24. Suresh Kumar, Inderpreet Kaur, Keya Dharamvir, L. M. Bharadwaj, Controlling the density and site of attachment of gold nanoparticles onto the surface of carbon nanotubes. *J. Coll. Inter. Science*, 369, 23, 2012.

Detail of patents:

Surface modification of steel with nanomaterials for minimization of scaling and corrosion in industrial heat exchangers, Gaurav Verma, Rajeev Nath Tiwari, Suresh Kumar, Keya Dharamvir, Patent no.

536492, Award date: 01/05/2024, Agency/country: The patent office, government of India.

Complete list of publications can be found at:

<https://scholar.google.com/citations?user=cva1QAMAAAAJ>