

Details



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Research Topic:

Modelling and Simulation of Single Walled Carbon Nanotube Based Two-Probe Electronic Devices

Supervisor: Dr. Ghulam Nabi Dar

Co-supervisor: Dr. Khurshed Ahmad Shah

***Research Publications:**

- **M Shunaid Parvaiz**, KA Shah, H Alroebi, GN Dar, FA Khanday, SMA Andrabi, R Hamid, Modeling and Simulation of Carbon Nanotube Amino-Acid Sensor: A First-Principles Study, Computational & Theoretical Chemistry, In press, 2021.
- **M Shunaid Parvaiz**, KA Shah, H Alroebi, GN Dar, Detection and separation of halogen gases using nano-porous carbon nanotubes, Physica E: Low-dimensional Systems and Nanostructures, 129, 114636, 2021
- **M Shunaid Parvaiz**, KA Shah, GN Dar, FA Khanday, Electrical doping in single walled carbon nanotube systems: A new technique, Computational Condensed Matter 25, e00507, 2020
- **M Shunaid Parvaiz**, KA Shah, GN Dar, S Chowdhury, O Farinre, P Misra, Spin transport in carbon nanotube magnetic tunnel junctions: A first principle study, Computational Condensed Matter 24, e00486, 2020
- **M Shunaid Parvaiz**, KA Shah, GN Dar, P Misra, Computational modeling of carbon nanotubes for photoresistor applications, Solid State Communications 309, 113831, 2020
- **M Shunaid Parvaiz**, KA Shah, GN Dar, S Chowdhury, O Farinre, P Misra, Electronic transport in penta-graphene nanoribbon devices using carbon nanotube electrodes: A computational study, Nanosystems: Physics, Chemistry, mathematics, 11, 2, 2020

- KA Shah, **M Shunaid Parvaiz**, GN Dar, Photocurrent in single walled carbon nanotubes, Physics Letters A, 383, 2207, 2019
- BM ud din Bhat, **M Shunaid Parvaiz**, P Sen, Effect of magnetic field and shell thickness on binding energies of a ZnSe/ZnS core shell quantum dot, Journal of Electronic Materials, 46, 967, 2017
- KA Shah, **M Shunaid Parvaiz**, Negative differential resistance in BN co-doped coaxial carbon nanotube field effect transistor, Superlattices and Microstructures 100, 375, 2016
- KA Shah, **M Shunaid Parvaiz**, Computational comparative study of substitutional, endo and exo BN Co-Doped single walled carbon nanotube system, Superlattices and Microstructures 93, 241, 2016

Conference Papers:

- **M Shunaid Parvaiz**, KA Shah, GN Dar, Electronic Properties of Pentagraphene Carbon Nanotubes: A first principle study, 6th International Conference on Nanoscience and Nanotechnology (ICONN), SRM Institute of Science and Technology, 2021
- KA Shah, **M Shunaid Parvaiz**, GN Dar, First-principles study on effect of doping on electronic properties of pentagraphene carbon nanotubes, NT21: International Conference on the Science and Application of Nanotubes and Low-Dimensional Materials, Rice University Texas, 2021
- **M Shunaid Parvaiz**, KA Shah, GN Dar, Carbon nanotube biomolecule sensor: A simulative study, Growth points in Physics, Department of Physics, University of Kashmir, 2019
- KA shah, **M Shunaid Parvaiz**, GN Dar, Modeling and Simulation of Carbon Nanotube Based Device Using Pentagraphene Electrodes, National Conference on Advances in Functional Materials, Department of Chemistry, Jamia Millia Islamia University, Delhi, 2019
- KA Shah, **M Shunaid Parvaiz**, GN Dar and S. S. Islam, Detection of Proteinogenic Amino Acid by a Single Walled Carbon Nanotube, International Conference on Advanced Materials (ICAM), Centre for Nanoscience and Nanotechnology, Jamia Millia Islamia University, New Delhi-25, India, 2019
- KA Shah, **M Shunaid Parvaiz**, GN Dar, Detection of Single Amino Acid Molecule by Single Walled Carbon Nanotube: A Computational Study, 6th World Congress on Nanomedical Sciences (ISNSCON), Delhi University and Jamia Hamdard, University held at Vigyan Bhawan, New Delhi, India, 2019

- KA Shah, **M Shunaid Parvaiz**, FA Najar, Non-equilibrium transport properties of metal gated CNTFET, Proc. of the Intl. Conf. on Nanotechnology for Better Living, 2016

Research Areas:

- Computational Physics
- Carbon nanotubes
- Modelling and Simulation
- Spintronics
- Molecular Dynamics

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