Dr.Tribikram Gupta

Designation :Assistant Professor (Senior Scale)
Qualification :M.Sc., Ph.D., D.Phil.
Experience :Teaching 11 years
Research 24 years

Area of Interest :Condensed Matter Theory
Date of Joining at RVCE :26/09/2012
Email ID :tgupta@rvce.edu.in

Project:
Number of Doctorate Students
Completed: 00 Guiding: 00

Publication

National Journals	National Conferences	International Journals	International Conferences	Book/Book Chapter Published	Patent Granted
		17	02	01	01

List of International Journal Publications :

1. Tribikram Gupta, Kalpana Sharma, Sanjay Gupta, "Study of the energy spectrum of a few one-dimensional and quasi one-dimensional lattices through tight binding and density functional theory", Physics of Fluids, 35(10), 2023.
2. Kalpana Sharma, Tribikram Gupta, S Vaijayanthimala, N Rajeswari Yogamalar, Vinayak Adimule, "Hybrid MOFs Supercapacitor: A Mini Review", Advanced Materials Research, 1177, 57-76, 2023.
3. Tribikram Gupta, Sameer Kulkarni, Kalpana Sharma, "A study of the permeation barrier of nanoporous graphene", Materials Today: Proceedings, 89, 41-44, 2023.
4. Ujwal Shreenag Meda, Nidhi Bhat, Om Madan Raikar, Tribikram Gupta, Kalpana Sharma, "Additives for lithium-ion batteries", Elsevier, 2023.
5. Dhruva Patil, Tribikram Gupta, "Realizing high performance gas filters through nano-particle deposition", Physical Chemistry Chemical Physics, 25(15), 9300-9310, 2023.
6. R. Arjun, Bharath Raghavan and Tribikram Gupta, "Role of pore geometry in gas separation using nanoporous graphene – A study in contrast between equilibrium and non-equilibrium cases, Chemical Physics Letters, Volume 760, Dec 2020, 137971.
7. H_2/CH_4 Gas Separation by Variation in Pore Geometry of Nanoporous Graphene by Bharath Raghavan and Tribikram Gupta, Journal of Physical Chemistry C, Vol-121(3),1904-1909, 2017.
8. Physics of metal-corrrelated barrier with chemical modulation-metal heterostructure by Tribikram Gupta and Sanjay Gupta, Physica B, Vol-449 (2014) 220-224.
9. Magnetic fluctuations near the Mott transition towards a spin liquid state by Serge Florens, Priyanka Mohan, C. Janani , Tribikram Gupta and R. Narayanan, Euro Physics Letters, Vol 103(2013), 17002,1-6.
10. Physics of metal correlated barrier with disorder metal heterostructure by Sanjay Gupta and Tribikram Gupta, Solid State Communications, Vol 152(2012), 878-882.
11. Physics of a metal-correlated barrier–metal heterostructure by Sanjay Gupta and Tribikram Gupta, Solid State Communications, Fast Track Publication 152 (2012), Issue 2, 53-55
12. Dimensional and temperature dependence of metal-insulator transition in correlated and disordered systems by Tribikram Gupta and Sanjay Gupta, Europhysics Letters, Vol -88(1).
13. Coulomb Interactions and Nanoscale Electronic Inhomogeneities in Manganites by Vijay B. Shenoy, Tribikram Gupta, H. R. Krishnamurthy, and T. V. Ramakrishnan, Physical Review Letters, 98, 097201, 2007
14. Long-range Coulomb interactions and nanoscale electronic inhomogeneities in correlated oxides by Vijay B. Shenoy, Tribikram Gupta, H. R. Krishnamurthy, and T. V. Ramakrishnan, Physical Review B, 80, 125121, 2009.
15. Ultrasonic attenuation in the vortex state of d-wave superconductors by Tribikram Gupta and D M Gaitonde, Physica C, 2003.
16. Ultrasonic attenuation in clean d-wave superconductors by Tribikram Gupta and D M Gaitonde, Physica C , 2002.
17. Ultrasonic attenuation in d-wave superconductors by Tribikram Gupta and D M Gaitonde, Modern Physics Letters B -2001

Patents Granted – 01

Filed for patent titled ” **Geometry Induced Enhanced Gas Separation using NanoPorous Graphene”**

Recognition and Awards : Was recognized by the RSST trust on 28th Jan 2018 for filing of the above patent.

Book Chapter:

C. Janani, S. Florens, **Tribikram Gupta** and R. Narayanan, “*Influence of Local Moment Fluctuations on the Mott-Transition” in* Lecture Notes in Physics, 802, Springer, Quantum Quenching, Annealing and Computation, Page-163-175.

Best Practices:

1. Offering a Global Elective course titled “Quantum Mechanics of hetero/nano strutures” for the 5th semester students.

2. Co-ordinator for the Centre of Excellence on Quantum Computation CIRQuIT.

Currently we have close to 10 active students working on different verticals. Some of the important verticals that are being pursued are Quantum Annealing, Quantum Optimization, Quantum Key Distribution, Quantum Machine learning and Quantum Materials and devices.

3. Mentor for the Quantum Projects submitted by VTU to TTDF/TCOE

4. Member of the Project Excecution Committee for Quantum Standardization and Testing Lab by VTU in collaboration with TTDF/TCOE.