

E-QMAT IIT Roorkee

Posters Presentations

ID	Name	Affiliation	Abstract Title
	DAY 1: October 12, 2022		
1	Sonika	School of Physical Sciences, Indian Institute of Technology Mandi, Kamand, Mandi 175075, India	Planar Hall effect in Cu intercalated PdTe ₂
5	Himalay Kolavada	Department of Physics, Electronics & Space Science, St Xavier's College, India	Quantum capacitance of multi-layered 2D iodine for supercapacitor electrode
7	Avishek Singh	Indian Institute of Science Education and Research, Bhopal, India	Implications of electron and hole doping on the magnetic properties of spin-orbit entangled Ca ₄ IrO ₆ from DFT calculations
8	Haribrahma Singh	Department of Chemistry, Indian Institute of Technology, Delhi, India	Transport and thermal properties of polycrystalline NbNiTe ₅
11	Shyamapada Patra	Department of Physics, Indian Institute of Technology Bhubaneswar, India	Tuning the wetting and electrical conductivity of multilayered 2D MXene (Ti ₃ C ₂ T _x) using low energy ion beam.
12	Nikhil Kumar	Department of Physics, S. D. College Barnala, Punjab, India	FIRST PRINCIPLES STUDY OF STRUCTURAL, PHASE TRANSITION & MAGNETIC PROPERTIES OF LaTe UNDER HIGH PRESSURE
13	Rahulkumar	Department of Physics, Sardar Vallabhbhai National Institute of Technology Surat, India	Electronic and Structural Properties of 2D MXene V ₃ C ₂ using First Principle with Machine Learning Approach
15	Arjyama Bordoloi	Department of Physics, Indian Institute of Technology Guwahati, 781039, Assam, India	Tunable Charge Ordering Behavior in Praseodymium based Perovskites
16	Sachin Verma	Department of Physics, Indian Institute of Technology Roorkee, India	Thermoelectric transport through strongly correlated quantum-dot based hybrid devices: A non-equilibrium many body Green's function approach
17	Bhupendra Kumar	Department of Physics, Indian Institute of Technology Roorkee, India	Phase and Thermal Driven Transport across T-Shaped Double Quantum Dot Josephson Junction
19	Gajendra Singh Bisht	Department of Physics, Indian Institute of Technology Guwahati, India	Correlation between magnetic and dielectric anomalies arising due to spin-chain arrangements in the paramagnetic phase of 1-D Ca ₃ Co _{1.9} Bi _{0.1} O ₆
21	Manish	QMAD, Institute of Nanoscience and Technology, Mohali, India	Light-enhanced gating effect at conducting interface of EuO-KTO interface
22	Sayan Mondal	Department of Physics, Indian Institute of Technology Guwahati, India	Vanishing of the \mathbb{Z} and \mathbb{Z}_2 invariants in a band deformed topological insulator
29	Pradeep Kumar	Department of Physics, Indian Institute of Technology Roorkee, India	Tunable resistive switching characteristics of AlN/FSMA multiferroic heterostructure based ReRAM devices
30	Abhirup Mukherjee	Department of Physical Sciences, Indian Institute of Science Education and Research Kolkata, India	Local metal-insulator transition in an extended Anderson impurity model
31	Purba Dutta,	Department of Physics, Indian Institute of Science Education and Research Bhopal, India	Antiferromagnet-semiconductor van der Waals Heterostructure
32	Koushik Ranjan Das	Department of Physics, Indian Institute of Science Education and Research Tirupati, India	Quantum transport through porphine molecule with varying contact geometries
35	Prabuddha Kant Mishra	Department of Chemistry, Indian Institute of Technology Delhi, New Delhi 110016, India	Large magnetoresistance in quantum spin Hall insulator candidate Ta ₂ Ni ₃ Te ₅
38	Nidhi	Department of Physics, Indian Institute of Technology Roorkee, India	Evidence of Weak Anti-Localization Effect in High Mobility Platinum Telluride PtTex
39	Bindiya Babariya	Department of Physics, Gujarat University, India	Nitrogen containing toxic gas sensing with Janus MoSSe monolayer: A first principles study
41	ARPITA DEB SINGHA	Department of Physics, Indian Institute of Technology Guwahati, India	Field-Induced Magnetic Phase Transitions in Fe substituted Ferrimagnetic MnCo ₂ O ₄ Spinel

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42	Anusree C V	Department of Physics, Indian Institute of Technology Hyderabad, India	Two-nodal surface phonons in MnAlGe
44	Shilpi Roy	Department of Physics, Indian Institute of Technology Guwahati, India	Multifractal behavior of dimerized Kitaev chain in presence of quasiperiodic potential
45	Harshita singh	Department of Physics, Indian Institute of Technology Guwahati, India	Magnetic Exchange Interactions and H-T Phase diagram of Kagomé Heisenberg antiferromagnet Co ₃ V ₂ O ₈
46	Greeshma R	Physics and Nanotechnology, SRM University, Sonipat, India	Tuning electronic and magnetic properties of FeRh alloy by chemical and physical method
	DAY 2: October 13, 2022		
48	Arnab Kanti Jana	Department of Physics, Ramakrishna Mission Vivekananda Educational and Research Institute, WB, India	Large magnetocaloric effect in Ho ₁₅ Si ₉ C
49	KARUNAKARAN M	Physics and Nanotechnology, SRM Institute of Science and Technology, India	Ab-initio study of tuning the electronic and magnetic properties of Ni ₂ MnGa Heusler alloy by Co and Mn compound doping
51	Maulesh Vala	Department of Physics, Sardar Vallabhbhai National Institute of Technology Surat, India	Schottky and Frenkel Defect on 2D SbS ₂ Monolayer: First Principles Calculations
52	Shubham Patel	Department of Physics, Indian Institute of Technology Kharagpur, India	Large Rashba spin-splitting in AA-stacked Janus van der Waals heterostructures
53	KHOKAN BHATTACHARYA	Department of Physics, Shiv Nadar University, India	Pressure evolution of the magnetic states in a topological Weyl semimetal Mn _{3+x} Sn _{1-x} : A Muon Spin Relaxation/Rotation study
55	Sreejani Karmakar	Department of Physics, Indian Institute of Science Education and Research, Tirupati, India	g – B ₃ C ₂ N ₃ : A new potential two dimensional metal-free photocatalyst for overall water splitting
60	Soham Avinash Atkar	Department of Physics, Indian Institute of Technology Guwahati, India	Role of B-site Mn substitution on the Magnetic and Dielectric Properties of LaNdCoO ₃ Perovskites
61	Ashes Shit	Department of Physics, Indian Institute of Technology Kharagpur, India	Effect of Gd doping on structural, transport and magnetic properties of double perovskite Sm ₂ CoMnO ₆
66	Krishan Kumar	Department of Physics, Indian Institute of Technology Roorkee, India	n-MoS ₂ /AlN/p-Si (SIS) heterojunction based solar cells and broad range (Visible-to-NIR) ultrafast photodetectors
67	VEERPAL	Department of Physics, Indian Institute of Technology Roorkee, India	Exotic Electronic Properties of Twisted Bilayer Graphene-Emergence of Twistronics
68	SUSHREE SARITA SAHOO	Department of Physics, Indian Institute of Technology Hyderabad, India	CaPdBi: A Nontrivial Topological Candidate
69	Mukesh Kumar Sharma	Department of Physics, Indian Institute of Technology Roorkee, India	Non-collinear magnetism in cubic and orthorhombic phase of CoV ₂ O ₄ : A DFT+Monte-Carlo study
71	KIRAN YADAV	Materials Science and Engineering, Indian Institute of Technology Delhi, India	Hydrogen adsorption and diffusion through two dimensional aluminium : A first principles investigation
73	Ramandeep Kaur	Department of Physics, Akal University, Punjab, India	Structural and Electronic Properties of Zintl Phase Ca ₂ MnxAg ₂ (1-x)Sb ₂ (x=0, 0.25, 0.5) using Spin Polarized First-Principles Calculations
74	Chandan Kumar Vishwakarma	Department of Physics, Indian Institute of Technology Delhi, India	Emerging half-metallic ferromagnetism in transition metal substituted NBT
75	Aswathi K	School of Physics, Indian Institute of Science Education and Research, Thiruvananthapuram, India	Spin-orbit entangled state in Ba ₃ CuSb ₂ O ₉ quantum spin liquid
77	Soumyasuravi Thakur	Department of Materials Science and Engineering, Indian Institute of Technology Delhi, India	Exploring Magnetism in graphene like two-dimensional Titanium
78	Mohd Zeeshan	Department of Physics, Indian Institute of Technology Delhi, India	Low lattice thermal conductivity in Zintl phases Na ₂ AuBi and Na ₂ AuSb: An ab initio study
79	Sweta Das	School of Basic Science (Physics), Indian Institute of Technology Bhubaneswar, India	Tunable Physical Properties of VSe ₂ hexagonal disks

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81	Charu Singh	Department of Materials Science and Engineering, Indian Institute of Technology Delhi, India	Micromagnetic simulations of emergent monopole defects and magnetization reversal in connected and dipolar Kagome Artificial Spin Ice
82	SUBODH KHAMARI	School of Basic Science, Indian Institute of Technology Bhubaneswar, India	Electrical, Optical and Magnetic Studies of flower shaped Fe ₃ O ₄ @Bi ₂ S ₃ Core shell hierarchical Structure
83	LAXMIPRIYA SAHOO	Physics, Indian Institute of Technology Bhubaneswar, India	TUNABLE MAGNETIC AND ELECTRONIC TRANSPORT PROPERTIES OF Co _{1+x} V _{2-x} O ₄
84	Rajan Saini	Department of Physics, Akal University, Punjab, India	MXene-based highly sensitive and selective NH ₃ sensor
86	Soumyakanta Panda	School of Basic Science(Physics), Indian Institute of Technology Bhubaneswar, India	Magnetism at the interface between iron and manganite based antiferromagnets
88	Maulesh Vala, Malhar Bhatt	Department of Physics, Sardar Vallabhbhai National Institute of Technology Surat, India	Optical Properties of 2D SbS ₂ monolayer with Defect Engineering
	DAY 3: October 14, 2022		
89	Soumyasree Jena	Department of Physics & Astronomy, National Institute of Technology Rourkela, India	First-principles study on electronic properties in BiFeO ₃ based heterostructures
90	Suvendu Ghosh	Department of Physics, Indian Institute of Technology Kharagpur, India	Revisiting quantum transport across junctions of multi-Weyl semimetals
91	Divya Rani	Department of Physics, Indian Institute of Technology Roorkee, India	Observation of the UV-Visible Photoluminescence from Silica Micro/Nanoparticles
92	SUBHASIS SHIT	Department of Physics, Indian Institute of Technology Kharagpur, India	Study of vortex states in Bi _{2-x} Pb _x Sr ₂ CaCu ₂ O _{8+d} (x = 0, 0.1) superconductors from magneto-transport analysis
93	Sananda Das	Department of Physics, Indian Institute of Technology Kharagpur, India	Multiferroicity in sol-gel derived gadolinium, cobalt co-doped BiFeO ₃ nanoceramics
94	Sanchari Bhattacharya	Department of Physics & Astronomy, National Institute of Technology Rourkela, India	Emergent Phenomena in KTaO ₃ /SrTiO ₃ Heterostructure
95	Soumya Chakraborty	Department of Physics, Indian Institute of Technology Roorkee, India	Quantum Transport in a Low Phosphorous Doped Silicon Single Electron Device
97	Parvesh Chander	Department of Physics, Indian Institute of Technology Roorkee, India	Observation of magnetodielectric effects in Nd _{0.5} Dy _{0.5} Fe _{0.5} O ₃ thin film and its utilization in microstripline based resonator circuit
98	Aryan Bhardwaj	Department of Physics, Indian Institute of Science Education and Research, Tirupati, India	Melting and Breakdown of Charge-Ordered State in Al doped NdSrMnO ₃ Off-stoichiometric Perovskites
99	Sonu Chhillar	School of Physical Sciences, Indian Institute of Technology Mandi, India	Magnetodielectric coupling as a manifestation of metamagnetic transition and structural distortion in Ba ₃ RRu ₂ O ₉ (R = Gd, Dy)
101	Bibek Ranjan Satapathy	Quantum Material and Device Unit, Institute of Nano Science and Technology, Mohali, India	Electronic and Magnetic studies of Iron based Transition Metal Oxides -A Theoretical approach
102	ANIL KUMAR	Department of Physics, Indian Institute of Technology Roorkee, India	Synthesis of Inverted Pyramid Microstructure Arrays to attain ultra-low reflection spectra for the Application of efficient Silicon Solar cell
111	Gourav Vaid	Department of Physics, Indian Institute of Science Education and Research, Thiruvananthapuram, India	Unity of universal parameter (alpha) in an overdoped single crystal of high temperature superconductor Bi ₂ Sr ₂ CaCu ₂ O _{8+x}
114	Amarjyoti Choudhury	Department of Physics, Indian Institute of Technology Roorkee, India	Magnetic order, electronic structure and topological properties of EuMg ₂ Bi ₂ from first principles study
115	Harsha	Quantum Material and Device Unit, Institute of Nano Science and Technology, Mohali, India	Possible Signatures of Chiral Anomaly in the Magnetoresistance of a Quasi-2-Dimensional Electron Gas at the Interface of LaVO ₃ and KTaO ₃
116	Trilokchand L. Kumavat	Department of Physics, Sardar Vallabhbhai National Institute of Technology Surat, India	Strain Dependent Optical Properties of MoSi ₂ P ₄ Monolayer - A Density Functional Study
117	SIDDHARAJ SINH JAYDEEPSINH KHENGAR	DEPARTMENT OF PHYSICS, Veer Narmad South Gujarat University, India	An ab initio Study of Structural, Electronic and Optical Properties of Janus AlInS ₂ homo-bilayer
118	PRUTHVISINH RAJESH SINH PARMAR	DEPARTMENT OF PHYSICS, Veer Narmad South Gujarat University, India	A Study of Optical Properties of Janus Monolayer PtTeO: First Principle Approach

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119	Anshu Gupta	Quantum Material and Device Unit, Institute of Nano Science and Technology, Mohali, India	Photo response study of the polar-polar interface LaVO ₃ -(111) KTaO ₃
120	Shama	Physics, Institute of Nano Science and Technology, Mohali, India	Study of the Magnetotransport Properties of the Topological Chiral Semimetal CoSi
122	Aparna M. Patel	Department of Physics, Sardar Vallabhbhai National Institute of Technology Surat, India	Optoelectronic Properties of van der Waals Heterostructure WS ₂ /Bi ₂ Se ₃
123	Alisha	Department of Physics, Indian Institute of Technology Roorkee, India	Structural and Electrical Transport Properties of Sputter Deposited SiC Thin Films
124	Srishti Bhardwaj	Department of Physics, Indian Institute of Technology Roorkee, India	Rare-earth Halide Based Single Phase Triferroic
125	Mohd Anas	Department of Physics, Indian Institute of Technology Roorkee, India	Magnetic properties and magnetocaloric effect in Ho _{0.5} Dy _{0.5} VO ₄
126	REENU RANI	Department of Physics, Indian Institute of Technology Roorkee, India	Palladium enhanced electrochemical super-capacitive performance of Chromium oxide thin films synthesized by reactive dc magnetron co-sputtering technique