

Awardees - Physics

Year 2023-24

Winner

Mr. Sudipto Das

Indian Institute of Technology Kharagpur, West Bengal

Supervisor: Prof Sudhansu S Mandal

Topic for which Awarded: "Novel Topological Phase of 5/2 Quantum Hall State"

Runner Up - I

Mr. Vinod Panwar

Indian Institute of Science, Bangalore, Karnataka

Supervisor: Prof Abha Misra

Topic for which Awarded: "Gate Field Induced Extraordinary Energy Storage in MoS₂-Graphene-Based Ultramicro-Electrochemical Capacitor"

Runner Up - II

Mr. Dipak Maity

Tata institute of fundamental research, Hyderabad, Telangana

Supervisor: Dr T N Narayanan

Topic for which Awarded: "Strain-Tunable Ultrastable MoS₂/Fluorographene Hybrid Photodetectors of High Responsivity"

Year 2022-23

Winner

Mr. Ranjith Kumar R

Manipal Academy of Higher Education, Manipal, Karnataka

Supervisor: Dr Sujit Sarkar

Topic for which Awarded: "Multicritical Phenomenon in Topological States of Matter"

Runner up I

Ms. Riyanka Karmakar

Indian Institute of Science Education and Research, Bhopal, Madhya Pradesh

Supervisor: Prof Adarsh K V

Topic for which Awarded: "Extreme Low-Threshold Multiple Carrier Generation in Atomically Thin MoS₂ with a Giant Quantum Efficiency of 200%"

Runner Up II

Mr. Choudhury Abinash Bhuyan

Homi Bhabha National Institute, IGCAR, Kalpakkam, Tamil Nadu

Supervisor: Dr Sandip Kumar Dhara

Topic for which Awarded: "Ultra-Clean Transferred Monolayer MoS₂: Implication for Field-Effect Transistors"

Year 2021-22

Winner

Ms. Manali Nandy

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu

Supervisor: Dr. John Philip

Topic for which Awarded: "Inter-Droplet Force Measurement between Gamma Alumina Stabilized Pickering Nano Emulsion Droplets: Role of Electrostatic and Electric Dipolar Interactions"

Runner Up I

Mr. Y R Kartik

Manipal Academy of Higher Education, Manipal, Karnataka

Supervisor: Prof. Sujit Sarkar

Topic for which Awarded: "Topological Quantum Phase Transitions and Criticality in Longer-Range Kitaev Chain"

Runner Up II

Mr. Praveen Kumar

Indian Institute of Technology, Patna, Bihar

Supervisor: Prof. Naveen K Nishchal

Topic for which Awarded: "Structured Light Beams and its use in Optical Encryption"

Year 2020-21

Winner

Mr. Subhajit Sinha

Tata Institute of Fundamental Research, Mumbai, Maharashtra.

Supervisor: Prof. Mandar M. Deshmukh

Topic for which Awarded: "Bulk Valley Transport in Twisted Double Bilayer Graphene"

Runner Up I

Ms. Leelashree S

University of Hyderabad, Hyderabad, Telangana.

Supervisor: Prof. S Srinath

Topic for which Awarded: **“Structural and Magnetic Properties of Room Temperature Multiferroic $\text{Lu}_{0.9}\text{Ho}_{0.1}\text{FeO}_3$ ”**

Runner Up II

Mr. Seemesh Bhaskar

Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Andhra Pradesh

Supervisor: Dr. Sai Sathish Ramamurthy

Topic for which Awarded: **“Hybrid Soret Nano-assembly for Ultrasensitive Surface Plasmon-Coupled Emission and Photonic Crystal-Coupled Emission Interfaces”**

Year 2019-20

Winner

Dr. Sukanta Nandi

Indian Institute of Science, Bangalore, Karnataka.

Supervisor: Prof. Abha Misra

Topic for Which Awarded: **“Spray Coating of Two-Dimensional Suspended Film of Vanadium Oxide-Coated Carbon Nanotubes for Fabrication of a Large Volume Infrared Bolometer”**

Runner-up – I

Dr. Surojit Ranoo

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu.

Supervisor: Prof. John Philip

Topic for Which Awarded: **“Enhancement of Heating Efficiency in Magnetic Hyperthermia Based Cancer Therapy upon In-Situ Orientation of Magnetic Nano Fluids”**

Runner Up II

Dr. Atasi Ray

University of Hyderabad, Hyderabad, Telangana

Supervisor: Prof. Rukmani Mohanta

Topic for Which Awarded: **“Probing New Physics in Semileptonic L Decays b ”**

Year 2018-19

Winner

Dr. Atasi Dan

Indian Institute of Science, Bangalore, Karnataka

Supervisor: Prof. Bikramjit Basu

Topic for which Awarded: “**Spectrally Selective Tandem Absorbers for Photothermal Conversion in High Temperature Solar Thermal Systems**”

Runner-up – I

Dr. Kannan Udaya Mohanan

Indian Institute of Technology, Hyderabad, Telangana

Supervisor: Dr. J Suryanarayana

Topic for which Awarded: “**Magnetostrictive Fe Ga Nanocontacts for Low- 73 27 Field Conductance Switching**”

Runner-up – II

Dr. Abdul Kalam S

University of Hyderabad, Hyderabad, Telangana

Supervisor: Prof. Soma Venugopal Rao

Topic for which Awarded: “**Identification and Classification of Explosives Using Femtosecond Laser Induced Breakdown Spectroscopic Technique at Standoff Distances**”

Year: 2017 – 18

Winner

Dr. Buddha Deka Boruah

Indian Institute of Science, Bangalore, Karnataka

Supervisor: Prof Abha Mishra

Topic for which Awarded: “**Doping Controlled Pyro-phototronic Effect in Selfpowered Zinc Oxide Photodetector for Enhancement of Photoresponse**”

Runner-up – I

Dr. Raktima Basu

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu.

Supervisor: Dr. Sandip Dhara

Topic for which Awarded: “**Origin of Phase Transition in VO and its Application as 2 Advanced Smart Window**”

Runner-up – II

Dr. Abhishek Talapatra

Indian Institute of Technology, Hyderabad, Telangana

Supervisor: Dr. Jyoti Ranjan Mohanty

Topic for which Awarded: “**Tuneable Magnetic Domains and Depth-resolved Microstructure in Gd-Fe Thin Films**”

Runner-up – II

Dr. Rafiq Mulla

Karnataka University, Dharwad, Karnataka

Supervisor: Prof. M K Rabinal

Topic for which Awarded: "Copper Iodide: An Eco-friendly Thermoelectric Material"

Year: 2016 - 17

Winner

Dr. Subhadeep Pal

TIFR Centre for Interdisciplinary Sciences, Narsingi, Hyderabad, Telangana

Supervisor: Prof. T.N. Narayanan,

Topic for which Awarded: "Development of Fluorographene Based Ammonia Sensor."

Runner-up – I

Dr. K.G. Raghavendra

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu.

Supervisor: Prof. Dr. Arup Das Gupta,

Topic for which Awarded: "Structural Investigations and Thermal Evolution of ZrO₂ Dispersoid Based ODS Alloys."

Runner-up – II

Dr. C Vanamali Shastry

Mangalore University, Mangalagangothri, Karnataka.

Supervisor: Prof. Dr. K.B Vijaya Kumar,

Topic for which Awarded: "Nucleon Nucleon Interaction with Instanton Induced Interaction and One Pion Exchange."

Runner-up – II

Dr. N Raju

Osmania University, Hyderabad, Telangana

Supervisor: Prof. Yadagiri Reddy,

Topic for which Awarded: "Structural and Magnetic Studies of Hexaferrite Based Magneto-Electric Materials."

Year 2015-16

Winner

Dr. V Rakesh Kumar

Advanced Centre of Research in High Energy Materials, Hyderabad, Telangana

Supervisor: Prof. P Prem Kiran

Topic for which Awarded: "Effect of Short Pulse Duration on Transparent Dielectrics: Understanding Water's Mysterious Behavior".

Runner-up – I

Dr. S Venkatesh

Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Anantapur, Andhra Pradesh.

Supervisor: Prof. R Sai Sathish

Topic for which Awarded: "1-Minute Cavity Engineering for >1000 Fold Enhancements in Surface Plasmon-Coupled Emission: A Mobile Phone Based Next-Gen Plasmonics Approach"

Runner-up – II

Dr. Subrata Ghosh

Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu

Supervisor: Prof. M Kamruddin

Topic for which Awarded: "Vertical Graphene Nanosheets: A Promising Candidate for Supercapacitor Electrode".

Year 2014-15

Winner

Dr. K Kamali

Indira Gandhi Centre for Atomic Research (IGCAR) Kalpakkam, Tamilnadu

Supervisor: Prof. T R Ravindran

Topic for which Awarded: "Selective Soft Mode Frustration in $KMn [Ag(CN)_2]_3$ Single Crystals Studied by Raman Spectroscopy and First-Principles Calculations"

Runner – Up I

Dr. Ahin Roy

Indian Institute of Science, Bangalore, Karnataka

Supervisor: Prof. Abhishek Kumar Singh

Topic for which Awarded: “Intriguing Atomic Structure and Semiconductor-like Sensitivity of Ultrathin Gold Nanowires”

Runner – Up II

Dr. Kuladeep Rajamudili

Central University, Hyderabad, Telangana

Supervisor: Prof. D Narayana Rao

Topic for which Awarded: “Femtosecond Laser Micro / Nano Machining on Silicon Surface for Photonic Applications”

Year – 2013-14

Winner

Dr. T Karthik

Indian Institute of Technology, Hyderabad, Telangana

Supervisor: Dr. Saket Asthana

Topic for which Awarded: “Evidence for the suppression of intermediate antiferroelectric ordering and their Structure property correlation in Cobalt substituted $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ ceramics.”

Runner Up I

Dr. P Suresh

University of Hyderabad, Hyderabad, Telangana

Supervisor: Dr. S. Srinath

Topic for which Awarded: “Structural, Electrical, and Magnetic Properties of Pure and Rare Earth Doped BiFeO_3 .”

Runner Up II

Dr. M Pradyumna

Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Ananthapur, Andhra Pradesh

Supervisor: Prof. K. Venkataramaniah

Topic for which Awarded: “Graphene as a Smart Spacer Material on Engineered Thin Film Hybrids for the Amplification of Surface Plasmon Coupled Emission Towards Sensing.”

Year – 2012-13

Winner

Dr. Sweta Rekha Ram

Indian Institute of Technology, Hyderabad, Telangana

Supervisor: Dr. V. Kanchana

Topic for which Awarded: “Fermi surface studies of Intermetallic Compounds under pressure: Ab-initio study”.

Runner Up I

Dr. P Suresh

Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam, Andhra Pradesh

Supervisor: Prof. K Venkataramanaiah

Topic for which Awarded: “ISAR Imaging of Moving Targets and Feature Extraction using Time-Frequency methods”.

Runner Up II

Dr. P Shankar

University of Hyderabad, Hyderabad, Telangana

Supervisor: Dr. Nirmal K Viswanathan

Topic for which Awarded: “Polarimetric Investigation of Surface Plasmon Resonance and Applications”

Year – 2011-12

Winner

Dr. P Lakshmi Praveen

Andhra Loyola College, Vijayawada, Andhra Pradesh

Supervisor - Prof. Durga P Ojha

Topic for which Awarded: “Molecular Structure, Electronic Spectra and Ultraviolet Stability of Nematic Liquid Crystals: Effect of Solvent and Substituent”

Runner Up I

Dr. K Ramesh Babu

Advanced Centre of Research in High Energy Materials (ACRHEM), Hyderabad, Telangana

Supervisor - Dr. G S Vaitheeswaran

Topic for which Awarded: "Materials for Geen Energy Application: A Density Functional Study."

Runner Up II

Dr. C Sujatha

National Institute of Technology, Warangal, Telangana

Supervisor - Dr. K Venugopal Reddy

Topic for which Awarded: “MgCuZn Nanoferrites for Multilayer Chip Inductors”

Year – 2010-11

Winner

Dr. Rajeswari Mulakalapalli

University of Hyderabad, Hyderabad, Telangana

Supervisor - Prof. V.S.S. Sastry

Topic for which Awarded: **“Detection of ultra-slow processes through NMR relaxometry: Application to Liquid Crystals”**

Runner Up I

Dr. Ch. Bheema Lingam

University of Hyderabad, Hyderabad, Telangana

Supervisor - Prof. Surya P. Tewari and Dr. G S Vaitheeswaran

Topic for which Awarded: **“Structural, Electronic, Bonding, and Elastic Properties of NH₃BH₃: A Density Functional Study.”**

Runner Up II

Dr. S Jagadees Chandra

Sri Sathya Sai University, Puttaparthi, Ananthapur, Andhra Pradesh

Supervisor - Dr. S. Siva Sankara Sai

Topic for which Awarded: **“A Study of Nonlinear Optical Properties of Bacteriorhodopsin Thin Films and Circumin and Their Application in Medical Diagnostics.”**

Special Consolation Award

Dr. Rama Krishna Chava

A N University Nagarjuna Nagar, Guntur, Andhra Pradesh

Supervisor - Dr. R.V.S.S.N. Ravi Kumar

Topic for which Awarded: **“Co(II) ion doped**

Chlorocadmiumphosphate Cd(HPO₄)Cl·[H₃N(CH₂)₆NH₃]0.5 crystals: A novel organically templated hybrid open-framework.”

Year – 2009-10

Winner

Dr. K L N Deepak

University of Hyderabad, Hyderabad, Telangana

Supervisor - Prof. D. Narayana Rao

Topic for which Awarded: **“Fabrication and Optical Characterization of Microstructures in PMMA and PDMS using Femtosecond Pulses for Photonic and Micro Fluidic Applications”**

Runner Up I

Dr. Y. Kalyana Lakshmi

Osmania University, Hyderabad, Telangana

Supervisor - Prof. P. Venugopal Reddy

Topic for which Awarded: “Electrical and Magnetic Behavior of Some Monovalent Doped CMR Materials”

Runner Up II

Dr. M Anil Kumar

University of Hyderabad, Hyderabad, Telangana

Supervisor - Dr. Suneel Singh

Topic for which Awarded: “Electromagnetically Induced Transparency and Slow Light in a Three Level System”

Year – 2008-09

Winner

Dr. Barilang Mawlong

University of Hyderabad, Hyderabad, Telangana

Supervisor - Dr. Rukmani Mohanta

Topic for which Awarded: “Probing New Physics In B - Fo (980) K Decays”

Runner Up I

Dr. B. Maruthi Manoj

University of Hyderabad, Hyderabad, Telngana

Supervisor - Professor D. Narayana Rao

Topic for which Awarded: “Nanodisplacement measurement using spectral shifts in a white-light interferometer”

Runner Up II

Dr. G Padmaja

Osmania University, Hyderabad, Telangana

Supervisor - Professor P. Kistaiah

Topic for which Awarded: “Optical absorption studies on mixed alkali borate glasses”

Special Awards to Out-Station Candidates

Physics

Dr. K. Raghavendra Kumar

Sri Krishna Devaraya University, Anantapur, Andhra Pradesh

Supervisor - Prof. R. Ramakrishna Reddy

Topic for which Awarded: "Optical, Physical And Radiative Properties Of Aerosols In A Semi-Arid Region, Anantapur."

Year – 2007-08

Winner

Dr. R. Sai Santhosh Kumar

University of Hyderabad, Hyderabad, Telangana

Supervisor - Prof. D. Narayana Rao

Topic for which Awarded: "Broadband supercontinuum generation in a single Potassium Di-hydrogen Phosphate (KDP) crystal achieved in tandem with sum frequency generation"

Runner Up I

Dr. P. Sarita,

Gitam Institute of Technology, Andhra University, Visakhapatnam, Andhra Pradesh

Supervisor - Prof. S. Bhuloka Reddy

Topic for which Awarded: "PIXE Analysis - A Novel Diagnosis and Pronostic Approach to Cancer of the Uterine Cervix."

Year – 2006-07

Winner

Dr. M. Raghavender,

Osmania University, Hyderabad, Telangana

Supervisor - Dr. G. Prasad

Topic for which Awarded: "Modification of dielectric relaxations in sodium bismuth titanate with samarium doping"

Runner Up I

Dr. G. Venkataiah,

Osmania University, Hyderabad, Telangana

Supervisor - Prof. P. Venugopal Reddy

Topic for which Awarded: "Structural, magnetic and electrical behaviour of some manganite based CMR materials"

Runner Up II

Dr. N. Venkatram,

University of Hyderabad, Hyderabad, Telangana

Supervisor - Prof. D. Narayana Rao

Topic for which Awarded: "Non-linear absorption and Scattering properties of cadmium sulphide nanocrystals with its application as a potential optical limiter"

Year – 2005-06

Winner

Dr. T. Goverdhan Reddy,

Osmania University, Hyderabad, Telangana

Supervisor - Dr. K. Rama Reddy

Topic for which Awarded: “Study of the Spin and Lattice Polaron Dynamics in CMR Manganites”

Runner Up I

Dr. N. Ajeetha,

Acharya Nagarjuna University, Guntur, Andhra Pradesh

Supervisor - Prof. V.G.K.M. Pisipati

Topic for which Awarded: “Liquid Crystals Influence of Oxygen on Phase Behaviour of Benzylidene Anilines”

Runner Up II

Dr. K. Prabhakar,

Osmania University, Hyderabad, Telangana

Supervisor - Prof. S.P. Mallikarjun Rao

Topic for which Awarded: “AC Fatigue Studies on PZT Ceramics using Acoustic Emission”