

DST-PURSE Sponsored Satellite Symposium - Physical Sciences

Bharathiar University - Coimbatore

Date & Session	Chair / Speaker	Title
DAY 1		
13.09.2022 Session- 1	Chair: Dr. N, Ponpandian , Dept. of Nanoscience and Technology	
2.30 – 3.15 (P1)	Dr R Gopalan Regional Director International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI), Chennai	Li-ion battery and Magnets as Key Materials Technology for Electric Vehicle and Automotive Applications
3.15 – 3.45 (I1)	Dr. T. Shanmuganantham Associate professor and Head Dept. of Electronics Engineering Pondicherry University	Recent Trends in Antennas
3.45 – 4	Tea Break	
13.09.2022 Session2	Chair: Dr. J. Vijayakumar Dept. of Electronics and Instrumentation, BU	
4 – 4.30 (I2)	Dr. D. Sindhanaiselvi Dept. of Electronics and instrumentation Engineering Pondicherry Technological University, Pondicherry	MEMS sensor and its applications
4.30 – 6 (OP)	Oral presentation (PSO1 – PSO10) Chair: Dr. J. Vijayakumar , Dept. of Electronics and Instrumentation, BU Dr. R. Kalaiselvan , Dept. of Physics, BU	
6 – 7.15 (PP)	Poster presentation (PSP1 – PSP16) Chair: Dr. P. Sakthivel , Dept. of Nanoscience and Technology Dr. Y. L. Jeyachandran , Dept. of Physics, BU	
DAY 2		
14.09.2022 Session- 1	Chair: Dr. S. Vijayakumar Dept. of Medical Physics, BU	
10 – 10.45 (P2)	Dr. C. Sekar Professor, Dept. of Bioelectronics and Biosensors, Alagappa University	Nanostructured Metal Oxide based Biosensors for the Diagnosis of Mental Disorders
10.45 – 11.15 (I3)	Dr. N. Karthikeyan, Ph.D, FUICC Sr. Medical Physicist & RSO, Dept. of Radiation Oncology, Mazumdar Shaw Cancer Institute, Bangalore	Candid Contribution of Physics in Modern Health Sciences
11.15 – 11.30	Tea Break	
14.09.2022 Session- 2	Chair: Dr. D. Nataraj Dept. of Physics, BU	
11.30 – 12 (I4)	Dr. G. Vaitheeswaran Dept. of Physics University of Hyderabad	Exploring baryte type scintillators $TiXO_4$ (X=Cl, Br) from first-principles theory
12 – 12.30 (I5)	Dr. Soma Venugopal Rao ACRHEM University of Hyderabad	Nanomaterials prepared using ultrashort laser pulses for defence applications
12.30 – 1.20 (OP)	Oral Presentation (PSO11 - PSO15) Chair: Dr. R. T. Rajendrakumar , Dept. of Nanoscience and Technology, BU Dr. R. Kalaiselvan , Dept. of Physics, BU	
1.20 – 2.30	Lunch Break	
14.09.2022	Chair: Dr. C. S. Sureka	

Session- 3	Department of Medical Physics, BU	
2.30 - 3.15 (P3)	Dr. K. N. Govindarajan Professor, Dept. of Medical Physics, P.S.G. Hospitals, Coimbatore	General Radiation Safety
3.15-3.45 (I6)	Dr. S. Sowmiya , MBBS, MD Radiation Oncologist, Dept. of Radiotherapy, Vadamalayan Integrated Cancer Centre, Madurai	An overview of Cancer and Role of Modern Radiotherapy in the field of oncology
3.45 – 4	Tea Break	
Session4 4 – 6.20 (OP)	Oral Presentation (PSO16 – PSO28) Chair: Dr. R. T. Rajendrakumar , Dept. of Nanoscience and Technology, BU Dr. R. Kalaiselvan , Dept. of Physics, BU	
6.20 - 7.20 (PP)	Poster presentation (PSP17 – PSP32) Chair: Dr. P. Sakthivel , Dept. of Nanoscience and Technology Dr. Y. L. Jeyachandran , Dept. of Physics, BU	
DAY 3		
15.09.2022 Session1	Chair: Dr. L. Senthilkumar Dept. of Physics, BU	
10 – 10.45 (P4)	Dr. V. Subramanian Indian Institute of Technology Madras, Chennai	Computational Studies on the Design and Development of Carbon-based Novel Two-Dimensional Dirac Materials
10.45-11.15 (I7)	Dr. A. Senthilkumar Carbon dioxide and Green Technology Research Centre, Vellore Institute of Technology University, Vellore	In-situ Visualization of Electrocatalytic Active Surface-Sites of Functionalized Nanomaterials by Scanning Electrochemical Microscopy (SECM) Technique
11.15 – 11.30	Tea Break	
15.09.2022 Session2	Chair: Dr. R. T. Rajendrakumar Dept. of Nanoscience and Technology	
11.30 – 12 (I8)	Dr. Vijayshankar Asokan Bernal institute, School of Engineering, University of Limerick, Limerick, Ireland	Advanced TEM analysis for the atomic scale applications
12 - 1 (OP)	Oral Presentation (PSO29 – PSO34) Chair: Dr. R. T. Rajendrakumar , Dept. of Nanoscience and Technology, BU Dr. R. Kalaiselvan , Dept. of Physics, BU	

Oral Presentations

PSO1	K Priyadharshini	Dept. Electronics and Instrumentation, BU	Synthesis of multi-walled carbon nanotubes using Azadirachta Indica as a catalyst
PSO2	V Neeraj Krishna	Dept. Electronics and Instrumentation, BU	Microwave band-pass filter in frequency reconfiguration with super substrate on cross-coupled line structure for LTE 2500, WiMAX and 5G based wireless communication Systems
PSO3	M. Mervin paulraj	Dept. Electronics and Instrumentation, BU	Prediction of the nutrient deficiency in cotton leaves using the Transfer learning model and monitoring its environmental parameters using IoT
PSO4	A. Hemalatha	Dept. Electronics and Instrumentation, BU	Studying tomato growth in soilless cultivation and using YOLO to detect early-stage pest and disease infection
PSO5	V. Naren Thiruvallar	Dept. EEE, Anna University Regional Campus, Coimbatore	Forward collision warning using ADAS
PSO6	M Ganeshbabu	Dept. Physics, BU	Temperature-dependent electrical and dielectric properties of LiNi _{1/3} Mn _{1/3} Co _{1/3} PO ₄ particles
PSO7	K Premalatha	Dept. Physics, BU	Chimera death states in a network of coupled chaotic oscillators
PSO8	K Sumithra	Dept. Physics, BU	Plasma modification and patterning of polymer thin films

PSO9	C Karthika	Dept. Physics, BU	Investigation of compound nucleus cross-section by surrogate reaction method
PSO10	P Keerthana	Dept. physics, PSGR Krishnammal College for women, Coimbatore	Hard Carbon derived from Nymphaea Alba as anode for Sodium ion batteries
PSO11	M Pavithrakumar	Dept. Physics, BU	Triselenasumanene-based organic molecules as donor and hole transporting materials for solar cell applications
PSO12	P Mehana	Avinashilingam Institute for Home science and Higher Education for Women, Coimbatore	Two proton radioactivity of ^{16}Ne using three body analogy
PSO13	N Thirumurugan	Dept. Physics, BU	Corrosion behavior of WE43 magnesium alloy
PSO14	P Nandhini	Dept. Physics, BU	Application of magnesium perfluorinated pinacolato borate (MgFPB) as an electrolyte for rechargeable Mg battery - a DFT study
PSO15	N Prasanna Naga Puneeth	Dept. Physics, BU	Investigation of the electrochemical properties of $\text{K}_x\text{Mn}_{0.7}\text{Co}_{0.3}\text{O}_2$ for K-ion batteries
PSO16	M Ragupathi	Dept. Physics, BU	Ficus religiosa derived hard carbon as a potential anode for K-ion Batteries
PSO17	T Sangeetha	Dept. Physics, BU	Adsorption and sensing properties of iodine co-absorbed metal phthalocyanine towards dopamine- A DFT study in gas and solvent phase
PSO18	T Anupriyanka	Dept. Physics, BU	Ultrahydrophobic properties of plasma surface modified cotton fabric
PSO19	T Thiruppathiraja	Dept. Physics, BU	Fluorine functionalized Nitrogen and Boron substituted Triangulene as an effective catalyst for oxygen reduction reaction in PEM Fuel Cells – a DFT study
PSO20	S R Varshaa	Dept. Physics, BU	Degradation of acid red 2 by microplasma discharge and its relative efficiency with photolysis process
PSO21	G. Srividhya	Dept. Nanoscience and Technology, BU	Enhanced electrochemical performances of NiV layered double hydroxide composited Ti_3C_2 for the dual application as supercapacitor electrode and oxygen evolution catalyst
PSO22	R. Rajalakshmi	Dept. Nanoscience and Technology, BU	Binary nanocomposite of WO_3 on reduced graphene sheets as a free-standing electrode for robust Hydrogen evolution reaction
PSO23	V. Thenral	Dept. Nanoscience and Technology, BU	Novel In-Vitro study of Biogenic approach to determine the Interaction of magnetite & surface modified magnetite nanoparticles on L929 mouse cell line
PSO24	A Ashif mohamed	Dept. Nanoscience and Technology, BU	Synthesis and characterization of Ce doped CoFe_2O_4 nanoparticles and photocatalytic activity
PSO25	K. Prabhu	Dept. Nanoscience and Technology, BU	Electrochemical immunosensor based on Au decorated Fe_3O_4 modified carbon yarn for flexible and sensitive detection of IL-6
PSO26	H Amir	Dept. Nanoscience and Technology, BU	Simultaneous detection and degradation of cigarette waste water using a photoelectrochemical method
PSO27	P Divya	Dept. Nanoscience and Technology, BU	MXene biosensor for ultrasensitive and highly specific electrochemical label-free detection of BRCA1 gene
PSO28	DR.K.SURESHKUMAR	Dept. Nanoscience and Technology, BU	Synthesis and characterization of Ce- MnO_2 catalyst for the selective oxidation of cyclohexane
PSO29	M Lakshmi Narayanan	Dept. Nanoscience and Technology, BU	Electrochemical immunosensor based on ZnO modified carbon yarn for flexible and sensitive detection of IL-6
PSO30	S. Sivaselvam	Dept. Nanoscience and Technology, BU	Environmental Risk assessment of Reduced Graphene Oxide (rGO) synthesized by gamma ray irradiation
PSO31	K V Kavya	Dept. Nanoscience and Technology, BU	Fabrication of Au@Cr-MOF composite for selective detection of caffeic acid in coffee powder: Artificial neural network study
PSO32	K Govindharaj	Dept. Nanoscience and Technology, BU	Ammonia sensing characteristics of tin oxide nanospheres

PSO33	M Mathankumar	Dept. Nanoscience and Technology, BU	Facile synthesis of WO ₃ nanorods for highly sensitive toxic NO _x gas sensors at low temperature
PSO34	A. Rebekah	Dept. Nanoscience and Technology, BU	Interfacial engineering of spinel oxide treated with heteroatom doped reduced Graphene oxide for catalyzing oxygen reduction and evolution reaction

Poster Presentations

PSP1	S Gokul	Dept. Electronics and Instrumentation, BU	Portable and point of care electronics devices in electrochemistry: A review on current status and their applications
PSP2	Silpa Ajaykumar	Malabar Cancer centre, Calicut University	Dosimetric comparison with Different ARC and Beam VMAT optimization in the Monaco treatment planning system
PSP3	T T Vafiya thaslim	Dept. Physics, University of Calicut, Kerala	Estimation of production cross sections of ⁸⁹ Zr in the Alpha induced reactions on natural Zirconium
PSP4	Shaima Akbar	Dept. Physics, University of Calicut, Kerala	The Photo-Activation based production of ⁹⁹ Tcm
PSP5	E Ummukulsu	Dept. Physics, University Of Calicut, Kerala	Radioisotope production from Thorium-232
PSP6	M Siva	Dept. Medical Physics, BU	A pilot study on the 3d cell culture technique
PSP7	M Preethi	Dept. Nanoscience and Technology, BU	Blue-emitting carbon quantum dots from papaya seeds for the fluorometric sensor of ciprofloxacin detection and bioimaging
PSP8	DR. M. Veena	Dept. Nanoscience and Technology, BU	Preparation of free-standing V ₂ O ₅ nanosheets for ammonia sensing Application: A potential candidate for flexible sensors
PSP9	S.Keerthana	Dept. Nanoscience and Technology, BU	Nickel ferrite encapsulated bio-derived carbon (NiF/C) for the ultrasensitive impedimetric immunosensor towards carcinoembryonic antigen detection
PSP10	R.Murugan	Dept. Nanoscience and Technology, BU	Investigation on Ni-Doped CdS Nanocrystals as an electrocatalyst for enhancing Oxygen Evolution Reaction (OER)
PSP11	A Rajapriya	Dept. Nanoscience and Technology, BU	Designing of 2D/2D matrix of Phosphorized NiCoP@MoS ₂ nanohybrid with enhanced electrochemical property for high energy density asymmetric supercapacitor
PSP12	Nikhil Prabhakar	Dept. Nanoscience and Technology, BU	Influence on effective and ineffective delamination of MXene (Ti ₃ C ₂ T _x) by tightly anchoring tin oxide nanocomposite for boosting the specific capacitance of supercapacitor
PSP13	Navadeepthy	Dept. Nanoscience and Technology, BU	Nickel ferrite/N-doped graphene nanocomposite as an efficient Bi- functional electrocatalyst for alkaline water splitting
PSP14	Vignesh	Dept. Physics, Sri Ramakrishna College of Arts and Science, Coimbatore	Advanced Nanotechnology in Agriculture
PSP15	T Sangavi	Dept. Nanoscience and Technology, BU	Boosting water electrolysis by coupling Nickel Boride with CoMn-LDH for oxygen evolution reaction
PSP16	Shandhiya Murugan	Dept Physics, Karpagam Academy of Higher Education, Coimbatore	Impact of Dragon fruit extract on synthesizing Zinc oxide nanoparticles
PSP17	S Mohanapriya	Dept. Physics, BU	Two dimensional T-C ₄₈ H ₁₆ sheet decorated with Li, Na and K atom for hydrogen adsorption- A DFT study
PSP18	T Thirupthika	Dept. Physics, BU	Observation of unusual delay in relaxation of Hot electrons in Mn-doped CdTe quantum dot solids via transient absorption spectroscopy

PSP19	M Akilesh	Dept. Physics, BU	Adsorption of heavy metals (lead and Mercury) on amine and thiol functionalized pristine and defected graphene nanosheet – a theoretical insight
PSP20	A V Anjana	Dept. Physics, University of Calicut, Kerala	A study of charge radii of exotic nuclei using HFB approximation
PSP21	C Subashini	Dept. Physics, PSGR Krishnammal College for Women, Coimbatore,	NASICON structured $\text{NaTi}_2(\text{PO}_4)_3$ cathode for sodium ion capacitor
PSP22	A Deepak	Dept. Physics, BU	Defected Graphene sheets as a Drug Delivery system for Anti-Cancer drugs Lapachol and β – Lapachone – A theoretical study
PSP23	A T Fathima Shirin Shana	Dept. Physics, Government arts and science college, Calicut, Kerala	Measurement of neutron energy spectrum from ^{241}Am -Be source using TOF method
PSP24	M Karthiga	Dept. Physics, BU	Sulfur functionalized Mxene ($\text{Ti}_3\text{C}_2\text{S}_2$) as a cathode scaffold for Lithium-sulfur battery – A first-principles study
PSP25	A Kausalya	Dept. Physics, BU	Sulfur functionalized MXene surface as an efficient catalyst for oxygen reduction reaction (ORR) – A first-principles study
PSP26	T Kiruthika	Dept. Physics, BU	Rapid ice crystal-assisted synthesis of zinc ferrite nano anode for Li-ion batteries
PSP27	M Manoranjitha	PSGR Krishnammal College for Women, Coimbatore	Microstrip patch antenna in ferroelectric properties
PSP28	R Saranya	Dept. Physics, BU	Effect of synthesis parameters on ZnZrO_3 perovskite structure
PSP29	A Santhiya	Dept. Physics, BU	DFT study on the Molecular properties of electron-donating and withdrawing functional groups substituted phenazine molecule
PSP30	N Sathiya kala K Shalini	Dept. Physics, Sri Ramakrishna College of Arts and Science, Coimbatore	Analyzing the stunning images of the jupiter captured by the james webb space telescope
PSP31	V M Vasanthakannan	Dept. Physics, BU	First principles studies on the effect of structural modifications on triphenylene based metal organic framework for hydrogen storage application
PSP32	P Maheswari	Dept. Physics, BU	Nanoparticle-mediated ultrafast growth of Sodium Hexafluorosilicate Microrods (Na_2SiF_6) from Silicon Nanocrystals