



4th International Conference
on
Emerging Smart Materials in Applied Chemistry (ESMAC-2023)
&
Interdisciplinary Science for Sustainability as a part of the
Diamond Jubilee Celebration of Indian Photobiology Society
18th-20th November 2023

Time Interval	Events
Day-1: 18th November 2023, Saturday	
Venue: Auditorium, Campus 5	
8.00 – 9.00 AM : Registration	
9.00-10.10 AM : Inauguration	
10.10-10:35 AM : Inaugural Talk by Prof. J. P. Mittal, BARC, Padma Shri Awardee	
SCIENTIFIC SESSION-01	
KEYNOTE LECTURE	
Chairpersons: Dr. Manmohan Parida, Director, DRDE, Gwalior & Prof. Prasanta Rath	
10:35-11:00	Prof. V. Ramakrishnan Memorial Award Lecture Prof. Ashok K Ganguli, Director, IISER, Berhampur Title: Design of nanomaterials for medical applications
Diamond Jubilee Talk (Online)	
11:00-11:05 : TEA/COFFE EBREAK	
Chairpersons: Prof. Baishnab Charan Tripathi, JNU & Dr. A.Samantaray, OUAT	
11:05-11:40	Prof. Susumu Kitagawa, Kyoto University, Japan
SESSION - 02	
ENDOWMENT/MEMORIAL LECTURE	
Chairpersons: Prof. Satyaban Jena, Utkal University & Prof. Suraj Kumar Tripathy, KIIT DU Prof. Nitin Chattopadhyaya, President, IPS	
11:40-12:05	Prof. G. V. Joshi Memorial Award Lecture Prof. Rajagopal Subramanian, University of Hyderabad Title: High light-induced omics and organization of thylakoid super complex in cyclic electron transport mutants of Chlamydomonas reinhardtii
12:05-12:30	Professor K K Rohatgi-Mukherjee Birth Centenary Lecture Prof. Anunay Samanta, University of Hyderabad Title: Ultrafast and Single Molecule Spectroscopy of the Perovskite Nanocrystals
12:30-12:55	Dr. K.M. Pannicker Memorial Award Lecture Prof. Debasis Dash, Institute of Life Science, Bhubaneswar Title: Decoding Brain Variant Peptides: A Proteogenomic Quest with Quality Control

12:55-13:20	Prof. Ashok K. Mishra, IIT Madras Title: Exploring the Fluorescence Properties and Application Potential of yne-Bridged Organic Molecules
LUNCH : 13.20 – 14.20 PM	
Session – 03	
Prof. Krishna Kamini Rohatgi-Mukherjee Special Session	
Chairpersons: Prof. Swati De, Kalyani University & Dr. Namrata Misra, KIIT-TBI	
14.20-14:45	Prof. Subhas C Bhattacharya : About Prof. K. K. Rohatgi-Mukherjee Title: A Brief Overview of Prof. K.K.Rohatgi-Mukherjee's Life and Achievement
14:45-15:10	Dr. A.T Biju, IISc Bangalore Title: N-Heterocyclic Carbene (NHC)-Catalyzed Synthesis of C-N, C-O and N-N Axially Chiral Molecules
15.10-15:35	Prof. Vandana Bhalla, GNDU, Punjab Title: Lighted' Materials: Self-assembly and Catalytic applications
15.35-16:00	Prof. Sharmistha Dutta Choudhury, BARC Title: Changing Photophysics with Supramolecules and Plasmonic/Photonic Substrates
16.00-16:25	Prof. Sagar Pal, IIT-ISM Title: Polysaccharide-Based Reagents for the Treatment of Mine Process Water
16.25-16:50	Dr. Jayeeta Bhaumik, DBT-Center of Innovative and Applied Bioprocessing Title: Sustainable Photoactive Materials from Agri-Biomass for Therapeutic Applications
TEA/COFFE EBREAK (16.50 – 16.55)	
Young Scientists Session-04 (16.55 – 19.55) ORAL	
(Will be carried out in two parallel session)	
Chair persons: Prof. Alakesh Bisai, IISER, Kolkata& Prof. B.N.Acharya, DRDE, Gwalior	
Judges: Dr. Soumen Giri, Dr. S. K. Varadwaj, Dr. Satyaranjan Pal, Dr. Bhawani.P.Bag, Dr. Santanab Giri, Dr. B.C. Sabat, Prof. Ashutosh Samantaray . Dr. Hirak Chakraborty, Dr. Sajib Das	
Allotted Time: Presentation – 06min + Response – 01 min	
Founder Dinner: 20.00	
Day – 02; 19th November, Sunday, 2023	
Visit to KIIT & KISS (8:00-9:15)	
SESSION-05	
Invited Lectures (Presentation 20min + discussion 5 min)	
Chairperson: Prof. Pradipta Purkayastha, IISER, Kolkata & Prof. Ashok K Sahoo, KIIT DU	
09:30-09:55	Prof. Jhuma Ganguly, IEST Title: Network-supported and Functionalized Sugar Hydrogels
09:55-10:25	Prof. A.S. Raghavendra, University of Hyderabad Title: Photorespiration optimizes photosynthesis and protects against oxidative stress and photoinhibition

10:25-10:50	Prof. Saptarshi Mukherjee, IISER, Bhopal Title: Small Molecule-Templated Silver and Copper Nanoclusters: Assembly-Induced Emission and Catalysis
Tea Break: 10.50 -11.00 AM	
SESSION-06	
Invited Lectures (Presentation 20min + discussion 5 min)	
Chairpersons Prof. Gopal C. Kundu, KIIT DU & Prof. C. R. Sinha, JU	
11:00-11:25	Prof. Narayan Pradhan, IACS Title: Brightening Semiconductor Quantum Dots: The impact of Facets and Surfaces
11:25-11:50	Prof. Prasanta Panigrahi, Director, IISER Kolkata Title: Quantum Chemistry and Quantum Biology: A Quantum Computational Perspective
11:50-12:15	Dr. Samit Guha, JU Title: Design of Rotaxane-Based Targeted Imaging Probes
12:15-12:40	Dr. Wasim Mir Raja, CDCRI Title: Perpetrator: Sustainable, advanced tri-layer paper based ceramic separator for LIBs and Supercapacitors
LUNCH & Poster Presentation: 12.40 – 15.00	
Chairpersons: Dr. Manju Unnikrishnan, Dr. Gourisankar Roymahapatra	
Judges: Dr. Prasenjit Mal, Dr. Soumen De, Dr. Chandra Shekhar Purohit, Dr. Abdur Rahaman, Dr. Jishnu Chakraborty, Dr. Shahid Anwar, Dr. Asit Baran Panda, Dr. Malay Kumar Rana	
SESSION-07	
Invited Lecture Session: (Presentation 20 min + discussion 5 min)	
Chairperson: Prof. Debaprasad Mandal, IIT, Ropar & Dr. Sanjib Das	
15:00-15:25	Prof. Amitava Das, IISER, Kolkata Title: Purpose-built Molecules and Molecular Assemblies for Therapeutic Applications
15:25-15:50	Prof. Benudhar Punji, NCL Pune Title: Catalytic Functionalization of Indoles by Ni and Fe: Scope and Reaction Mechanism
15:50-16:15	Dr. Madhurima Jana, NIT, Rourkela Title: Interrogating the role of hydroxychloroquine and alcohol to inhibit the RBD of SARS-CoV2
16:15-16:40	Prof. Himansu S Biswal, NISER, Bhubaneswar Title: Weak Interactions with Strong Consequences: Insights from the Photochemistry of Small Molecules and Proteins
SESSION-08	
Short Invited Lectures Tea break for 5minutes	
Chairperson: Prof. Bikash Kumar Jena & Dr. Samit Guha, JU (Short Invited Lecture: 20 min (18+2))	

16:45-17:45	
	Dr. Sadananda Mandal Title: Impedance Spectroscopy and Conductivity Behavior of CoFe ₂ O ₄ Modified Dielectric BaTiO ₃ Ce Multiexciton Generation and Electron Transfer in Perovskite Quantum Dots-Molecule Hybrid"
	Dr. Debkumar Bhowmick Title: The role of triplet electrons and their coherency on oxygen reduction reaction
	Dr. Saurabh Dewangan Title: Analysing microstructure and hardness of aisi 1020-0.18%c steel after heat treating and subsequent cooling at different rates
	Dr. Himadri Sekhar Das Title: Study on the effect of thickness of Ga-doped Zinc oxide (GZO) transparent conducting oxide and its application as anode materials in organic light-emitting Diode
	Dr. Santanab Giri , HIT Title: Insights into the catalytic activity of boron-doped thiazoles in the Diels–Alder reaction
	Dr. Gyana Ranjan Sahoo, Cornell University Title: Study of variations in cervical tissue environment through principal component analysis of FLIM images
	Dr. G. Roymahapatra, HIT Title: Strategic development of chitosan based fluorescent hydrogel
Young Scientists Session (17:30– 18.30) ORAL	
Day 3: 20th November, 2023, Monday	
Venue: SS Bhatnagar Hall, CSIR-IMMT, Bhubaneswar	
SESSION-09	
Invited Lecture Session: (Presentation 20 min + discussion 5 min)	
Chairperson: Dr. Y.S. Chaudhary, IMMT & Prof. T.K.Bastia, KIIT DU	
09:00-09:25	Prof. Prasenjit Mal, NISER, Bhubaneswar Title: Visible Light Photocatalysis in Organic Synthesis
09:25-09:50	Prof. Abhijit Patra, IISER, Bhopal Title: Nanoporous organic polymers for micropollutant separation and photocatalysis
09:50-10:15	Dr. Joydev Dinda, Utkal University Title: Photoluminescence and therapeutic potential of Ag(I)-, Au(I/III)-, Pt(II)-and Ru(II)-N-heterocyclic carbene(NHC) complexes
Tea Break: 10.15-10:20	
SESSION-10	
Memorial Award Lecture	
Chairperson: Prof. Nitin Chattopadhyay, President, Indian Photobiology Society & Dr. L.D. Besra, CSIR-IMMT	

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10:20-10:45	Prof. B. B. Biswas Memorial Award Lecture Prof. Swagata Dasgupta, IIT-KGP Title: Oxidative Stress in Proteins: Ribonuclease a dimerization
10:45-11:10	Professor N. N. Dasgupta Memorial Award Lecture Prof. K. K. Nanda, Director, Institute of Physics Title: Applications Associated with Breathing of Nanostructured Materials
SESSION-11	
Invited Lecture Session: (Presentation 20 min + discussion 5 min)	
Chairperson: Dr. Abhijit Patra, IISER, Bhopal & Dr. Bikash Kumar Jena, CSIR-IMMT	
11:10-11:35	Prof. Ponneri C. Ravikumar, NISER, Bhubaneswar Title: Weak Chelation Assisted C-H Functionalisation using Cobalt Catalyst: A Sustainable Approach
11:35-12:00	Prof. Debaprasad Mandal, IIT-Ropar Title: Beyond Li-ion battery: Aqueous Metal-sulfur and High Energy-dense Metal-air Batteries
12:00-12:25	Prof. Pramit Kumar Chowdhury, IIT-Delhi Title: Different Aspects of Macromolecular Crowding: From Hard-Soft Interactions to Energy Flow
12:25-12:50	Prof. Chandra Shekhar Purohit, NISER, Bhubaneswar Title: Homo-Dimetallic Silver Purine Complexes as Neuromorphic Materials
12:50-13:15	Prof. Madhur Srivastava, Cornell University Title: Novel Computational Tools for Structural Analysis of Molecules
Lunch Break & Students' Competition: 13.15 - 15.00 PM	
SESSION-12	
Invited Lecture Session: (Presentation 20 min + discussion 5 min)	
Chair persons: Prof. Pramit Kumar Chowdhury, IIT-Delhi & Dr.Nirmal Goswami, CSIR-IMMT	
15:00-15:25	Prof. Alakesh Bisai, IISER Kolkata Title: Biomimetic Total Synthesis of Complex Natural Products
15:25-15:50	Prof. Debdas Ray, Shiv Nadar University Title: Exothermic Delayed Fluorescence in Organic Donor-Acceptor Conjugates
15:50-16:15	Prof. Asit Baran Panda Title: Design and synthesis of inorganic porous hollow spheres for energy storage and conversion application
VALEDICTORY SESSION (16:15-17:15)	