



TECHNICAL SESSION (TS) DETAILS

ICEMRB-2023

P0TS-Technical and non-technical sessions in I-Block Auditorium
P1TS-Parallel Technical Sessions in Seminar Hall 1, I-Block
P2TS-Parallel Technical Sessions in Seminar Hall 2, I-Block

Registration

➤ **December 18, 2023**

Registration **2:00 PM-4:00 PM**

➤ **2:00 PM- 4:00 PM Registration**

For MRU participants and organising committee members

➤ **December 19, 2023**

Registration **8:45 AM-1:00 PM**

8:45 AM- 9:45 AM: Registration all participants

POTS

Venue: I-Block Auditorium

Scientific Sessions (SS)

- **SS2: Fuel Cells, Solar and other energy devices**
- **SS3: Advancement with rechargeable batteries**
- **Related abstracts from other scientific sessions**

➤ **December 20, 2023****POTS4****8:45 AM-10:15 AM****Chair: Prof. Ambesh Dixit, Indian Institute of Technology, Jodhpur, India****8:45 AM-9:45 AM: Plenary Talk: Prof. Safir Ahmad Hashmi, University of Delhi, Delhi-110007, India****Title: High Performance Polymer-based Electrolytes for Sodium Ion Batteries****9:45 AM-10:15 AM- Invited Talk: Dr. Anurag Gaur, Netaji Subhas University of Technology, New Delhi, India****Title: Energy Conversion and Storage Devices: Hydroelectric Cell and Hybrid****POTS5****10:30 AM-1:00 PM****Chair: Prof. Ram Janey Chaudhary, UGC-DAE CSR Indore****10:30 AM-11:00 AM: Invited Talk: Prof. Mmantsae Diale, University of Pretoria Pretoria, South Africa****Title: Growth and characterization of all-inorganic halide perovskites for improved stability in solar cells.****11:00 AM-11:30 AM: Invited Talk (Emerging Researcher): Dr. Surbhi Gupta, Motilal Nehru National Institute of Technology-Allahabad****Title: Multiferroics Photovoltaics****11:30 AM-1:00 PM: Oral Presentation: 15 min each (13+02)**RP23003r (**Mr. Manas Nasit**); RP23005r (**Ms. Yeshaben Sharma**); RP23011 (**Mr. Rajiv Kashyap**); RP23012 (**Ms. Maitri Patel**); RP23013 (**Dr. Kavita Kumari**); RP23015r (**Ms. Pinki Kumari**)**POTS6****2:30 PM-5:00 PM****Chair: Prof. Safir Ahmad Hashmi, University of Delhi, Delhi-110007, India****2:30 PM-3:15 PM: Keynote Talk : Prof. Ambesh Dixit, Indian Institute of Technology Jodhpur****Title: Design & Development of Efficient Cathode Materials for Iron Ion Battery: A potential alternative to Lithium Ion Batteries****3:15 PM-3:45 PM_ Invited Talk (Emerging Researcher): Dr. S Janakiraman, Indian Institute of Technology Indore****Title: Ceramic Composite Separator Electrolyte System for High Temperature Lithium Ion Batteries****3:45 PM-5:00 PM Oral Presentations: 15 min each (13+02)**RP23016r (**Ms. Garima Srivastava**), RP23018r (**Ms. Ravina**), RP23020 (**Mr. Sachchidanand Pandey**); RP23031r (**Mr. Samar Kishore**); RP23032 (**Mr. Pinakin Bhatt**)

➤ **December 21, 2023****POTS7****8:45 AM-10:15 AM****Chair:** *Dr. Trilok Singh, Department of Energy Science and Engineering, IIT Delhi,***8:45 AM-9:45 AM: Plenary Talk: Prof. M V Reddy,** Energy Storage Technology, Quebec, Montreal, Canada**Title:** Recent advances in materials for Energy storage**9:45 AM-10:15 AM-Invited Talk: Dr. Sesha Srinivasan,** Florida Polytechnic University, USA**Title:** Materials Innovations for Energy Storage, Energy Savings and Environmental Sustainability**POTS8****10:30 AM-1:00 PM****Chair:** *Dr. Devendra Vashisth, MRIIRS India***10:30 AM-11:00 AM: Invited Talk: Dr. Trilok Singh,** Department of Energy Science and Engineering, IIT Delhi, Hauz Khas, New Delhi,**Title:** A Paradigm Shifts in Efficiency and Stability of Thin Films Solar Cells**11:00 AM-11:30 AM: Invited Talk (Emerging Researcher): Dr. Vikas Sharma,** The Hebrew University of Jerusalem, Jerusalem, Israel**Title:** Transparent Structure: Impact of structure, irradiation and process for advanced applications including Space, BIPV and Tandem geometry.**11:30 AM-1:00 PM: Oral Presentations:** 15 min each (13+02)RP23036 (*Monika Verma*); RP23044 (*Dr. Poorva Sharma*); RP23047r (*Ms. Shruti Rialach*); RP23052 (*Mr. Rajendra Singh Nagar*); RP23058 (*Ms. Deepti Ahuja*); RP23063 (*Mr. Rakesh Goswami*)**POTS9****2:30 PM-5:00 PM****Chair:** *Prof. Mrinal Pandey, MRU India***2:30 PM-3:15 PM: Keynote Talk : Prof. Shalendra Kumar,** University of Petroleum and Energy Studies, Dehradun, India**Title:** Metal oxide and carbon nanostructures as electrodes for energy storage applications**3:15 PM-3:45 PM: Invited Talk (Emerging Researcher): Dr. Neeti Tripathi,** (AIST), Kansai Centre, Japan**Title:** Development a solid-state triplet-triplet annihilation based near infrared-to-visible upconversion system for broad band excitation**3:45 PM-5:00 Oral Presentations:** 15 min each (13+02)RP23070 (*Mr. Jaswinder Singh Sandhu*); RP23071 (*Mr. Kumaresh Soam*); RP23072 (*Mr. Shailendra Kumar Khare*); RP23079 (*Ms. Priyanka*); RP23080r (*Ms. Gargi Dhiman*)

➤ **December 22, 2023****POTS10****8:45 AM-10:15 AM****Chair: Dr. Gunasekaran Venugopal, Central University of Tamil Nadu, India****8:45 AM-9:45 AM: Plenary Talk: Prof. Pol Vilas**, Davidson School of Chemical Engineering, Purdue University, India**Title:** Energy Storage at Extreme Temperatures, Safely**9:45 AM-10:15 AM: Invited Talk: Dr. Shailesh Upreti**, CEO C4V New York, USA**Title:** Digital DNA: Synchronizing Molecules to Machines to Build Smart Gigafactories**POTS11****10:30 AM-1:00 PM****Chair: Prof. Shalendra Kumar, Univ Petroleum & Energy Studies, Dehradun****10:30 AM-11:00 AM Invited Talk: Prof. L. P. Purohit**, Department of Physics, Gurukula Kangri University, Haridwar**Title:** Rare Earth and Transition Metal Codoped Metal Oxide Nanocomposites for Optoelectronic Applications**11:00 AM-11:30 AM: Invited Talk: Dr. Pawan Kumar**, NIT Rourkela, Rourkela**Title:** Energy Storage Characteristics of ST and NN Modified BNT-KNN, BNT-BT-BKT Ceramics**11:30 AM-1:00 PM: Oral Presentations:** 15 min each (13+02)RP23081 (**Ms. Priyambada Sahoo**); RP23082 (**Ms. Ruhani Baweja**); RR23086 (**Mr. Varanasi Rahul**);RR23095(**Ms. Kiranjot Kaur**); RR23103 (**Mr. Kunal**); RR23114 (**Mr. Jitendra Kumar Yadav**)**Concluding Session****2: 30 PM-5:00 PM****2:30 PM- 5: 00 PM****Concluding Session**

P1TS

Venue: Seminar Hall-I

Scientific Sessions (SS)

- **SS2: Materials for Energy**
- **SS3: *Environmental Issues of batteries and energy related material***

P1TS4**2:30 PM-5:00 PM****Chair:: Dr. Aga Shahee, University of Kashmir, Srinagar, J&K, India****2:30 PM-3:15 PM Keynote Talk : Prof. Dr. V. K. Jain, Amity University Uttar Pradesh, Noida, India****Title: Applications of Plasmons in Solar Cells and Thermal Energy Storage****3:15 PM-3:45 PM: Invited Talk (Emerging Researcher):Dr. Parmod Kumar, YMCA, Faridabad, Haryana****Title: Photocatalytic Degradation of Some Oxides****3:45 PM-5:00 Oral Presentations: 15 min each (13+02)****RP23057 (Ms. Anu Bala); RP23061 (Mr. Deepak Kumar); RP23062 (Ms. Anshika Gupta); RP23064 (Mr. Praveen Gothwal); RP23074 (Dr. Sanjay Kumar Singhal)****➤ December 22, 2023****P1TS5****10:30 AM-1:00 PM****10:30 AM- 1:00 PM****Chair: Dr. D. Parajuli, Tribhuvan University, Nepal****10:30 AM-11:00 AM: Invited Talk: Dr. Gunasekaran Venugopal, Central University of Tamil Nadu****Title: Green H₂ Generation using Biomass-derived nanostructures in Direct Sea Water****11:00 AM-11:30 AM: Invited Talk (Emerging Researcher): Dr. Aga Shahee, University of Kashmir, Srinagar, J&K, India****Title: Experimental Discovery of the Linear Magnetoelectric Effect in the Topological Magnon Antiferromagnet Cu₃TeO₆.****11:30 AM-1:00 PM: Oral Presentations: 15 min each (13+02)****RP23076 (Mr. S D Dhruv); RP23077 (Mr. Prakhar Nagar); LP23129 (Mr. Shivank Kalia); RR23110 (Dr. Neeraj Gupta); RR23111 (Dr. Hitesh R. Thakare); RR23112 (Mr. Rukayat SB Zakri)**

P2TS

Venue: Seminar Hall-II

Scientific Sessions (SS)

- ***SS4: Synchrotron techniques for energy materials and batteries***
- ***SS5: Computational methods for energy related research***
- ***SS7: Multidisciplinary research area***

➤ **December 20, 2023****P2TS1****10:30 AM-1:00 PM****Chair: Dr. S Janakiraman, Indian Institute of Technology, Indore****10:30 AM-11:00 AM: Invited Talk: Dr. Ankush Vij**, Central University of Haryana

Title: Synthesis and synchrotron based characterization of nanomaterials for white LEDs

11:00 AM-11:30 AM: Invited Talk (Emerging Researcher): Dr. Moun Misra, University of Delhi, New Delhi 110003, India.Title: Oxygen chemisorption induced perturbations epitaxial AlN and Al_xGa_{1-x}N films**11:30 AM-1:00 PM: Oral Presentations:**RP23007r (*Ms Riya Gola*); RP23010r (*Mr. Harendra Singh Bohara*); RP23017 (*Mr. Pankaj Kumar*); RP23022 (*Ms. Yogmaya Sharma*); RP23025r (*Ms. Komal Jain*); RP23029 (*Dr. Mrinal Pandey*)**P2TS2****2:30 PM-5:00 PM****Chair: Prof. Amit K Awatshi, Lovley Professional University, India****2:30 PM-3:15 PM: Keynote Talk : Prof. Pramod Bhatnagar**, University of Delhi South Campus, New Delhi, India

Title: Nanomaterials in Flexible Electronic Devices for Energy Applications

3:15 PM-3:45 PM:Invited Talk (Emerging Researcher): Dr. Sachin Gupta, Bennett University, NoidaTitle: Two-dimensional MoS₂ field effect transistor with PMA electrodes**3:45 PM-5:00 PM: Oral Presentations: 15 min each (13+02)**RP23030r (*Ms. Nidhi Sharma*); RP23033 (*Mr. Harsh Yadav*); RP23035 (*Ms. Tina Sharma*); RP23037 (*Mr. Prabhdeep Singh*); RP23041 (*Dr. Daisy R.*)➤ **December 21, 2023****P2TS3****10:30 AM-1:00 PM****Chair: Dr. Monu Misra, University of Delhi, New Delhi 110003, India****10:30 AM-11:00 AM: Invited Talk (Emerging Researcher): Dr. Rojalin Sahu**, Kalinga Institute of Industrial Technology, India

Title: A new insight into the ZIF-67 based triboelectric nanogenerator for self-powered robot object recognition

11:00 AM-11:30 AM: Invited Talk (Emerging Researcher): Dr. Braj Bhusan Singh, HBTU Kanpur, India

Title: Polycrystalline Topological Insulator for spin to charge current conversion.

11:30 AM-1:00 PM: Oral Presentations: 15 min each (13+02)RP23042 (*Dr. Daisy R*); RP23043 (*Ms. Bharti Garg*); RP23045 (*Mr. Vishal Thakur*); RP23054 (*Ms. Saumya Vaish*); RP23065 (*Mr. Lukman Ahmed*); RP23067 (*Ms. Shipra Tripathi*)**P2TS4****2:30 PM-5:00 PM****Chair: Prof. Javid Ali, JMI University, Delhi, India****2:30 PM-3:15 PM: Keynote Talk : Dr. Sanjeev Gautam**, Panjab University Chandigarh

Title: X-ray Spectroscopy and it's application to photovoltaic materials

3:15 PM-3:45 PM:Invited Talk (Emerging Researcher): Dr. Jae Yeon Park, Korea Atomic Energy Research Institute (KAERI), Republic of Korea

Title: X-ray imaging for battery materials

3:45 PM-5:00 PM Oral Presentations: 15 min each (13+02)RR23091 (*Mr. Krishna Rathore*); RP23075 (*Dr. S. Nady*); LP23124 (*Mr. Abubakar Saidu Shuaibu*); RR23105 (*Mr. Prathamesh Deore*); RR23107 (*Ms. Aanchal Pardeshi*)

Poster Session

Venue: Ground Floor, I Block

All Scientific Sessions (SS) together

➤ **December 20, 2023****Poster cum oral Session****5:00 PM-6:30 PM**

5:15PM_6:00 PM: Oral presentation; 15 min each (13+02)

LP23125 (*Mr. Yakubu Mohammed*); LP23126 (*Khadija Abdullahi Gomari*); LP23127 (*Mam Ishaku Dagareh*)
LP23130 (*Ms. Anitha Dhasekaran*); LP23138 (*Mr. Y. Subramanian*)➤ **December 21, 2023****Poster Session****5:00 PM-6:30 PM**RP23004r (*Mr. Sharad Singh Jadaun*); RP23006 (*Dr. Jitendra Pal Singh*); RP23009 (*Mr. Itum Ruti*); RP23014 (*Ms. Anjali Sharma*); RP23019 (*Dr. Harsha Devnani*); RP23027 (*Mr. Ajay Kumar*); RP23040 (*Ms. Bharti Garg*); RP23034r (*Ms. Kriti Misra*); RP23053 (*Ms. Seema Devi*); RP23059 (*Mr. D. Gurung*); RP23060 (*Dr. Jitendra Pal Singh*); RP23066 (*Mr. Lalruatsanga*); RP23078 (*Ms. Shimali*); RR23088 (*Prof. Sangsul Lee*); RR23097 (*Ms. Bhumika*); RR23099 (*Ms. KM Preeti*); RR23109 (*Ms. Damini*); RR23104 (*Mr. Osheen Sharma*); RR23113 (*Mr. Shankee Verma*); LP23118 (*Mr. Sumit Kumar*); LP23119 (*Ms. Bharti Garg*); LP23120 (*Ms. Vaishali Madhani*); LP23122 (*Mr. Gaurav Bhatnagar*); LP23131 (*Mr. Kuldeep Mehta*), LP23132 (*Mr. Vijay Kumar Gill*), LP23133 (*Mr. Ravinshu*), LP23135 (*Ms. Nitin Kumar Gautam*); LP23136 (*Dr. Gunasekaran Venugopal*); LP23137 (*Ms. Neeraj Singhal*), CR23001, CR23002 (*Plantech*)