

# NO CHANGE IN SCHEDULE WILL BE CONSIDERED

## प्रस्तुति कार्यक्रम/ PRESENTATION SCHEDULE

### 79<sup>वीं</sup> त्वरक उपयोगकर्ता कार्यशाला/ 79<sup>th</sup> ACCELERATOR USERS' WORKSHOP

DECEMBER 15, 2025 (MONDAY)

|               |  |
|---------------|--|
| 09:00 – 09:15 | WELCOME ADDRESS BY DIRECTOR, IUAC FOLLOWED BY REMARKS BY CHAIRMAN, AUC   |
|               | <i>Session Chairperson:</i>  |
| 09:15 – 11:00 | <i>Session I: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>   |
| 79120         | Investigating the Influence of PQNT channels on fusion in 35, 37Cl+ 70Zn reactions.: Dr. Jagdish Gehlot, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.   |
| 79206         | Probing of Entrance Channel Effects in Heavy-ion Induced Fission Dynamics at Moderate Excitation Energies.: Mr. Satyam Gangwar C/o. Prof. Avinash Agarwal, Bareilly College, Bareilly, Uttar Pradesh.  |
| 79209         | Production of Radioisotopes and their dose distribution in the human body for PET/SPECT scan: simulation and experimental Studies.: Mr. Milan Singh C/o. Dr. Kailash Pandey, UPES, Dehradun, Uttarakhand.                                    |
| 79222         | Study of the astrophysical 12C (p, $\gamma$ )13N and 13C (p, $\gamma$ )14N reactions using indirect Asymptotic Normalization Coefficient (ANC) method.: Mr. Nihal Kumawat C/o. Dr. Ashok Kumar Mondal, Manipal University Jaipur, Rajasthan. |
| 79312         | Study of heavy ion fusion reaction dynamics around mass region A>100.: Prof. Ajay Kumar Tyagi, Banaras Hindu University, Varanasi, Uttar Pradesh.  |
| 79325         | Investigating reaction mechanism using X-ray-gamma coincidence method.: Dr. Abhishek Yadav, Amity Institute of Nuclear Science & Technology, Amity University, Uttar Pradesh.  |
|               | <b>11:00 – 11:15 BREAK</b>   |
|               | <i>Session Chairperson:</i>  |
| 11:15 – 13:00 | <i>Session II: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>  |
| 79107         | Exploring the interplay between nuclear deformation and transfer couplings on fusion excitation.: Prof. Manoj Kumar Sharma, University of Lucknow, Uttar Pradesh.  |
| 79118         | Investigation into influence of neutron transfer channels in fusion dynamics of medium mass nuclei around the Coulomb barrier.: Dr. Rishabh Kumar, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.                             |
| 79128         | Direct measurement of B(E3) via coulomb excitation in 152Gd.: Mrs. Indu Bala, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.  |
| 79216         | Nuclear excitations and the K quantum number.: Mr. Sachin Kumar Singh C/o. Prof. Sujit K. Tandel, Shiv Nadar Institution of Eminence, Greater Noida, Uttar Pradesh.  |
| 79218         | Single-particle excitations in the vicinity of doubly-magic nuclei.: Mr. Jay Kaushik C/o. Prof. Sujit K. Tandel, Shiv Nadar Institution of Eminence, Greater Noida, Uttar Pradesh.   |
| 79243         | Spectroscopic Investigation to Probe the Structural Behavior of Nuclei Near Shell Closure.: Mr. Guru Kishore B C/o. Dr. Shashi Shekher Tiwary, Manipal University Jaipur, Rajasthan.   |
| 79245         | Search for the exotic and non-exotic excitations in transitional nuclei.: Mr. Sandeep kumawat C/o. Dr. Shashi Shekher Tiwary, Manipal University Jaipur, Rajasthan.  |
| 79307         | Quadrupole Moment Measurements for the Nuclear Structure Investigations.: Dr. Neeraj Bansal, Guru Nanak Dev University, Amritsar, Punjab.  |

13:00 - 14:00 BREAK

Session Chairperson:

14:00 – 16:00 Session III: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79115 Investigation of the  $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$  reaction via an Indirect Method.: Dr. Tanmoy Bar, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.

79221 Mass gated neutron multiplicity measurements along the Hg region with the NAND facility.: Ms. Yukta Ranjan Sharma C/o. Prof. B. R. Behera, Panjab University, Chandigarh, Punjab.

79229 Systematic Investigation of Fission Fragment Mass and Angular Distributions, Neutron Multiplicities, and Mass Flow Dynamics in Heavy Ion Induced Fission of Americium, and Fermium Isotopes.: Mr. Shiva Prasad Nayak C/o. Dr. E. Prasad, Central University of Kerala, Kasaragod district, Kerala.

79320 Study of fusion and transfer reactions in  $7\text{Be} + 9\text{Be}$  system.: Prof. Shashi Verma, University of Delhi, Delhi.

79114 Charge state distribution measurement during ion solid collision.: Mr. Deepak Kumar swami, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.

79130 & 79527 A foundational study at IUAC on establishing optical emission spectroscopy as a validated diagnostic for Xenon plasma electric propulsion.: Dr. Soumen Ghosh, Ahmedabad University, Gujarat.

79502 Exploring the stability and decay of butadiene cation and dications.: Prof. Jyoti Rajput, University of Delhi, Delhi, Delhi.

16:00 - 16:15 BREAK

Session Chairperson:

16:15 – 17:25 Session IV: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79508 Energetic proton-induced ring expansion and rapid dehydrogenation in methylated and ethylated PAHs.: Prof. Umesh Kadhane, IIST (Indian Institute of Space Science and Technology), Kerala.

79514 Probing Structure-Dependent Roaming and Migration in Propanol Trications Via Highly Charged Ion Impact Ionisation.: Dr. Krishnendu Gope, IISER Thiruvananthapuram, Kerala.

79526 Probing Site-Specific Charge Migration and Three-Body Fragmentation dynamics in 1- Chloro-2-Iodoethane Trications via Highly Charged Ion Impact Ionisation.: Dr. Krishnendu Gope, IISER Thiruvananthapuram, Kerala.

79525 Investigation of Nitrogenation Effects and Ionization Dynamics in Single Aromatic Ring Molecules under Proton Impact.: Dr. K. Murugadass, Amrita Vishwa Vidyapeetham, Deemed University, Coimbatore, Tamil Nadu.

79112 Effect of high LET radiation on Microalgae physiology, genetic and metabolic profile.: Dr. Shashi Kumar, ICGEB, New Delhi, Delhi.

79127 Heavy ion irradiation mediated mutagenesis in *Oryza sativa* (rice) and *Solanum lycopersicum* (tomato):. Dr. Sneha Lata Singla-Pareek, ICGEB, New Delhi, Delhi.

79313 In vitro effect of Nanoparticles with piperine in radiation-resistant cancer cells to develop effective radiosensitizer.: Dr. Pallavi Srivastava, Galgotias University, Greater Noida, Uttar Pradesh.

# 79<sup>वीं</sup> त्वरक उपयोगकर्ता कार्यशाला/ 79<sup>th</sup> ACCELERATOR USERS' WORKSHOP

## DECEMBER 16, 2025 (TUESDAY)

| <i>Session Chairperson:</i> |   |
|-----------------------------|---|
| <b>09:00 – 11:00</b>        | <i>Session I: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>  |
| <b>79102</b>                | <b>Groundwater dating of deep aquifers in Punjab.: Dr. Gopal Krishan, National Institute of Hydrology, Roorkee., Uttarakhand.</b>   |
| <b>79103</b>                | <b>AMS dating of Archaeological site Bang-Harirajpur, District Puri, Coastal Odisha.: Dr. Kishor K Basa, National Monument Authority, Delhi.</b>  |
| <b>79113</b>                | <b>Radiocarbon dating of marine shells from archaeological contexts in the Saurashtra region for paleoclimate reconstruction.: Dr. Harsh Raj, CSIR-NIO, Dona Paula, Goa.</b>  |
| <b>79135</b>                | <b>10Be and 26Al measurement using AMS.: Prof. Kuljeet Kaur Marhas, Physical Research Laboratory, Near Gujarat University, Navrangpura, Ahmedabad,, Gujarat.</b>  |
| <b>79211</b>                | <b>Assessing Palaeoclimate Reconstruction potentials of Cellulose Isotopic composition in Broadleaf trees of the Central Indian Core Monsoon Zone.: Mr. Avanish Mishra C/o. Dr. Trina Bose, Krantiguru Shyamji Krishna Verma Kachchh University, Gujarat.</b>     |
| <b>79215</b>                | <b>Unravelling the impact of past climate change and anthropogenic activity on Gharana wetland ecosystem of Jammu district, J&amp;K, India.: Mr. Vimal C/o. Prof. Som Nath, University of Jammu, Jammu and Kashmir.</b>   |
| <b>79237</b>                | <b>Landscape development in northern front of Shillong Plateau, NE India: A geomorphic and geochemical understanding.: Mr. Junaid Pradhan C/o. Prof. Parag Phukon, Gauhati University, Guwahati, Assam.</b>   |
| <b>11:00 – 11:15 BREAK</b>  |   |
| <i>Session Chairperson:</i> |   |
| <b>11:15 – 13:00</b>        | <i>Session II: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>   |
| <b>79105</b>                | <b>Past changes in the depositional environment at Mid Ocean Ridge: Carlsberg Ridge.: Dr. Pratima M Kessarkar, CSIR-National Institute of Oceanography, Goa.</b>  |
| <b>79121</b>                | <b>The Kangra Valley Erratics: Constraining the Antiquity of Largest Glacial Episode in the NW Himalaya.: Prof. Milap Chand Sharma, Jawaharlal Nehru University, New Delhi, Delhi.</b>  |
| <b>79205</b>                | <b>Microplastic distribution and its impact on metal availability in soils of Aligarh region.: Ms. Mavia Naushad C/o. Prof. Sudesh Yadav, School of Environmental Sciences, JNU, New Delhi, Delhi.</b>  |
| <b>79210</b>                | <b>Proxy calibration and climate reconstruction using lake sediments from NW Himalaya.: Mr. Irfan Ahmad Wani C/o. Dr. Praveen K Mishra, Cluster University of Jammu, Jammu and Kashmir.</b>   |
| <b>79213</b>                | <b>Late Holocene Paleoclimate Reconstruction from the Meadows of The Central Higher Himalaya.: Ms. Priyanka Bhandari C/o. Prof. Narendra Kumar Meena, H. N. B. Garhwal University, Srinagar Garhwal, Uttarakhand.</b>   |
| <b>79238</b>                | <b>Quantification of dissolved oxygen in the Arabian Sea during different boundary conditions by using benthic foraminiferal characteristics.: Mr. Abhishek Pradhan C/o. Dr. Rajeev Saraswat, CSIR-NIO (National Institute of Oceanography), Dona Paula, Goa.</b> |
| <b>79246</b>                | <b>Understanding palaeo aragonite compensation depth through a multiproxy approach.: Ms. Mugdha Ambokar C/o. Dr. Rajani Panchang, SPPU (Savitribai Phule Pune University), Maharashtra.</b>   |

13:00 - 14:00 BREAK

Session Chairperson:

14:00 –16:00

Session III: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

- 79116 Simultaneous Determination of Radiocarbon ( $^{14}\text{C}$ ) in Dissolved Inorganic and Organic Carbon Fractions of Environmental Water Samples.: Ms. Sonali, BARC (Bhabha Atomic Research Centre), Mumbai, Maharashtra.
- 79124 Comparative Assessment of Denudation Rates and Morphological Evolution in Two Major Eastward- and Westward-Flowing Rivers of the Southern Granulite Terrane (SGT), India.: Dr. Rudra Mohan Pradhan, NCESS (National Centre for Earth Science Studies), Akkulam, Trivandrum, Kerala.
- 79126 Unrevealing the dynamics of Kosi megafan: A comprehensive study of sedimentology, geomorphology, and chronology.: Dr. Sandeep Panda, Wadia Institute of Himalayan Geology, Dehradun, Uttarakhand.
- 79132 AMS dating of Harappan Archaeological Site Lothal, District: Ahmedabad, Gujarat.: Dr. Shubha Majumder, ASI (Archaeological Survey of India) Vadodara Circle, Gujarat.
- 79208 Glacier Recessional and Geomorphological Changes in Western and Northern Sikkim Himalaya.: Mr. Sagar Dipak Mahalle C/o. Dr. Avinash M. Kandekar, SPPU (Savitribai Phule Pune University), Maharashtra.
- 79225 Late Quaternary Glacial and climatic history reconstruction of Chhombu Chhu, Dombang and Yumesamdong valleys, North Sikkim, Eastern Himalaya.: Ms. Samikha Rai C/o. Dr. Manasi Debnath, Nagaland University, Kohima Campus, Nagaland.
- 79241 Examining Hydrogeological Diversity in parts of the NCR (Delhi National Capital Region) using Isotopic and geochemical signatures.: Mr. Saurajit Saha C/o. Dr. Aditya Sarkar, Presidency University, Kolkata, West Bengal.

16:00 - 16:15 BREAK

Session Chairperson:

16:15 – 17:15

Session IV: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

- 79104 Glacial Chronology and Climatic Implications during Local Last Glacial Maxima: A Regional Synthesis of the Western and Eastern Himalayas-Part II.: Dr. Suresh Das, Indian Institute of Technology Bombay, Maharashtra.
- 79212 Millennial-Scale Variability of Oxygen Minimum Zone-Denitrification Dynamics in the Southeastern Arabian Sea since the Late Glacial Period.: Mr. Dhiraj Suresh Shinde C/o. Dr. Yoganandan Veeran, Bharathidasan University, Tiruchirappalli, Tamil Nadu.
- 79223 Fluvial Dynamics and Geomorphic Evolution of the Ganga River during the Late Pleistocene at its Mountain Exit.: Ms. Tanya C/o. Prof. Vimal Singh, University of Delhi, Delhi.
- 79226 Constraining Glacial Extent and Timing in Gemur Watershed, Bhaga Basin, Lahul Himalayas.: Ms. Sonam Chhomo C/o. Prof. Milap Chand Sharma, Jawaharlal Nehru University, New Delhi, Delhi.
- 79231 Source apportionment of atmospheric/sedimentary black carbon and organic lipids from sediment from Arctic: a molecular-level tracer approach and  $^{14}\text{C}/^{13}\text{C}$ -based isotope perspective.: Mr. Madhav Prasad Mishra C/o. Dr. Srinivas Bikkina, DST-BSIP (Birbal Sahni Institute of Paleosciences), Lucknow, Uttar Pradesh.
- 79234 7 Distinct  $^{13}\text{C}$ -footprints of particulate organic matter (POM) in the freshwater lakes of Schirmacher Hills, East Antarctica.: Mr. Sanjay Kumar Singh Gahlaud C/o. Dr. Srinivas Bikkina, DST-BSIP (Birbal Sahni Institute of Paleosciences), Lucknow, Uttar Pradesh.

# 79<sup>वीं</sup> त्वरक उपयोगकर्ता कार्यशाला/ 79<sup>th</sup> ACCELERATOR USERS' WORKSHOP

## DECEMBER 17, 2025 (WEDNESDAY)

| <i>Session Chairperson:</i> |   |
|-----------------------------|---|
| 09:00 – 11:00               | <i>Session I: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>  |
| 79109                       | Slip rates of the north-east Himalayan Front Thrust using cosmic ray exposure dating.: Dr. Priyanka Singh Rao, University of Delhi, Delhi.  |
| 79117                       | AMS Carbon Dating.: Prof. Buddha Rashmi Mani, Indian Institute of Heritage (Deemed to be University), Noida, Uttar Pradesh.   |
| 79202                       | Geochemical Perspectives on Late Quaternary Paleoenvironment: Monsoon Variability, Sediment Provenance, and Marine Productivity from Southwestern Bay of Bengal Sediments.: Mr. Sudipto Kumar Kolay C/o. Dr. Reji Srinivas, NCESS (National Centre for Earth Science Studies), Akkulam, Trivandrum, Kerala. |
| 79203                       | Intermediate water ventilation and fluctuations in the intensity of the Arabian Sea OMZ.: Ms. Niharika Panigrahi C/o. Dr. Sushant Suresh Naik, CSIR-NIO, Dona Paula, Goa.   |
| 79214                       | Holocene Diatom assemblages in three short sediment cores of the Indian Sundarbans and their palaeo-ecological implications.: Mr. Abhra Abir Chowdhury C/o. Dr. Neera Sen Sakar, University of Kalyani, West Bengal.  |
| 79217                       | Late Quaternary palaeohydrology and fluvial dynamics of the Orsang River Basin, Western India.: Mr. Saremulhaq Urf Parwej Mosarraf Shaikh C/o. Dr. Deepak M Maurya, MSU Baroda, Vadodara, Gujarat.  |
| 79227                       | Mangroves development and dynamics in the Sundarbans, east coast of India since mid-Holocene: Unravelling short term impacts and long-term drivers.: Mr. Sangram Sahoo C/o. Dr. Shilpa Pandey, Birbal Sahni Institute of Palaeosciences, Lucknow, Uttar Pradesh.  |
| 79314                       | Source-to-Sink Reconstruction of Indian Summer Monsoon Variability over the Past 60 ka: Insights from 10Be Isotopes, Geochemical and Clay Mineral Proxies.: Dr. Sajid Ali, Jamia Millia Islamia, A Central University, New Delhi, Delhi.  |
| <b>11:00 – 11:15 BREAK</b>  |   |
| <i>Session Chairperson:</i> |   |
| 11:15 – 13:00               | <i>Session II: BTR- 1, 2, 3, 4, 5/ BTR- 5 &amp; 1, 2, 3 (8+2 Minutes)</i>   |
| 79125 & 79516               | Defect engineering in Pb-free multi-layered perovskite BaBi <sub>4</sub> Ti <sub>4</sub> O <sub>15</sub> relaxor for energy storage applications.: Dr. Ramcharan Meena, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.   |
| 79219                       | Exploring Inorganic Thermoelectric Materials for Efficient Waste Heat Recovery: A Study on the Impact of Doping on Electrical and Thermal Properties.: Ms. Rumaisa Jan C/o. Prof. Seemin Rubab, National Institute of Technology Hazratbal, Srinagar, Jammu and Kashmir.                                    |
| 79327 & 79510               | Investigation of magnetic and magneto-electronic properties by modifying interfacial structure of ferroelectric substrate and magnetic layer using Ion beam interactions.: Prof. Rabindra Nath Bhowmik, Pondicherry Central University, Kalapet, Pondicherry.   |
| 79328                       | Ion-beam engineered 2D TMDs for neuromorphic and quantum electronic applications.: Dr. Sandeep Kumar, Jamia Millia Islamia, New Delhi, Delhi.   |
| 79332                       | Ion Irradiation-Induced Defect Engineering of Mg <sub>2</sub> Si <sub>1</sub> -Sn Thermoelectric Materials for Enhanced Energy Conversion Efficiency.: Prof. Rajendrakumar Thangavelu Ramasamy, Bharathiar University, Coimbatore, Tamil Nadu.  |
| 79503                       | Controlled He <sup>2+</sup> Ion Implantation of Lithium Niobate for Fabrication of Thin Film LNOI on SiO <sub>2</sub> /Si Substrates.: Mr. Rohit Miglani, Society for Applied Microwave Electronics Engineering & Research, Mumbai, Maharashtra.  |
| 79509                       | Irradiation behavior of compositionally disordered rare earth-based oxides (ABO <sub>3</sub> and A <sub>3</sub> B <sub>5</sub> O <sub>12</sub> ) for nuclear waste management.: Mr. Santosh Kumar Sahu, Bhabha Atomic Research Centre (BARC) Mumbai, Maharashtra.   |

13:00 - 14:00 BREAK

Session Chairperson:

14:00 – 16:00

Session III: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79106 Study of tunable dielectric properties of lead-free ferroelectric thin films under swift heavy ion irradiation.: Dr. V. Raghavendra Reddy, UGC-DAE CSR Indore, Madhya Pradesh.

79232 Effect of ion irradiation on the structural and optical properties of rGO/NiO nanocomposites for gas sensing applications.: Mr. Saurabh Pandey C/o. Dr. Subhash Chandra Pokhriyal, P. N. G. P. G. College Ramnagar, Kumaun University Nainital, Uttarakhand.

79302 Improved photocatalytic properties of SHI treated perovskite nanomaterials for waste water treatment and green Hydrogen production.: Dr. T. S. Senthil, North-Eastern Hill University, Shillong, Meghalaya.

79309 Harnessing Swift Heavy Ions for Energy Storage: Engineering LaSrMO<sub>3</sub> Perovskite Nanomaterials for Supercapacitors.: Dr. T. S. Senthil, North-Eastern Hill University, Shillong, Meghalaya.

79311 Swift Heavy Ion-irradiation tailored photoactivity of aerosol coated Cu<sub>2</sub>O/TiO<sub>2</sub> heterostructure electrodes for tertiary waste water treatment applications.: Dr. Shubra Singh, Crystal Growth Centre, Anna University, Chennai, Tamil Nadu.

79326 Metal (Ag) Ions-Engineered in Li<sub>2</sub>TiO<sub>3</sub>/SnO<sub>2</sub> hetero-structure Thin Films via Low-Energy Ion Beam Processing for High-Performance Visible Light Photodetectors.: Dr. Satya Veer Singh, NIT (National Institute of Technology) Warangal, Telangana.

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16:00 - 16:15 BREAK

Session Chairperson:

16:15 – 17:15

Session IV: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79138 Irradiation of meteoritic organic synthetic precursors.: Prof. Kuljeet Kaur Marhas, Physical Research Laboratory, Ahmedabad, Gujarat.

79236 Improved Hydrogen Sensing in Ion-Irradiated Pd-Based Thin Film Samples.: Ms. Madhuri Surya C/o. Prof. Amit Kumar Chawla, UPES, Dehradun, Uttarakhand.

79529

79239 Investigation of the Irradiation-Induced structural Disorder in High-entropy Pyrochlore Ceramics.: Mr. Gaurav Kumar C/o. Prof. Pawan K. Kulriya, Jawaharlal Nehru University, New Delhi, Delhi.

79530

79244 To study the mechanism and effect of Ion Irradiation Assisted Metal Induced Crystallization (MIC) for Metal/a-Semiconductor/substrate bilayer system.: Ms. Parul Verma C/o. Dr. Balaji birajdar, JNU, New Delhi, Delhi.

79323 Study on the effect of ion implantation on photochromic feature of Eu(WO<sub>3</sub>)<sub>2</sub>(OH)<sub>3</sub> and Y(WO<sub>3</sub>)<sub>2</sub>(OH)<sub>3</sub> phosphors for application in radiation dosimetry.: Dr. Jitumani Kalita, Cotton University, Guwahati, Assam.

79331 Enhancing the Reliability of 2D Material-Based Field-Effect Transistors for Space Electronics through Ion Irradiation Studies.: Dr. Laxmi Dhanaraju Varma Sangani, CASEST, School of Physics, University of Hyderabad, Gachibowli, Hyderabad, Telangana.

79335 Swift Heavy ions (SHI) irradiation of 100 MeV Oxygen and Silver ions on Ru-Doped BiFeO<sub>3</sub> and YFeO<sub>3</sub> Thin Films as CMOS an Alternatives to RuO<sub>2</sub> Gate Electrodes.: Dr. V. C. Bharath Sabarish, KRCT (K. Ramakrishnan College of Technology)- Trichy, Tamil Nadu.

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# 79<sup>वीं</sup> त्वरक उपयोगकर्ता कार्यशाला/ 79<sup>th</sup> ACCELERATOR USERS' WORKSHOP

## DECEMBER 18, 2025 (THURSDAY)

*Session Chairperson:*

09:00 – 11:00

*Session I: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)*

79123 **Swift Heavy Ion-Irradiation Induced Modulation of Magnetization Dynamics in Fe<sub>3</sub>Sn<sub>2</sub>/Pt Thin Films for Spintronic Applications.:** Mrs. Deeksha Khandelwal, IUAC (Inter-University Accelerator Centre), New Delhi, Delhi.

79204 **Investigating dopant induced modification in oxide thin films and synergistic effects using energetic ion irradiation.:**  
& Mr. Adarsh Digdarshi Bhuyan C/o. Dr. Shushant Kumar Singh, Regional Institute of Education, NCERT, Utkal University, Bhubaneswar, Odisha.  
79504

79220 **Defect Engineering in Functional Oxides Induced by Ion Beams for Improved Gas Sensing.:** Ms. Charul Uniyal C/o. Prof. Manoj Yadav,  
& SDSUU (Sri Dev Suman Uttarakhand University), Uttarakhand.  
79505

79247 **Transport property and electrochemical analysis of metal oxide and graphitic carbon nitride nanocomposites for energy storage applications and swift heavy ion irradiation effect studies.:** Mr. Nilamani Kumar C/o. Dr. Anup Kumar Nath, Cotton University, Guwahati, Assam.

79308 **Ion-Beam Defect Engineering of PVDF-based Multifunctional Composites for Enhanced Magnetoelectric Performance.:** Dr. Anupinder Singh, Guru Nanak Dev University, Amritsar, Punjab.

79321 **Tuning Structural, Optical, and Ionic Transport Properties of Chalcogenide Glasses via Metal Ion Implantation.:** Dr. Anupama Yadav,  
& Sri Aurobindo College, (University of Delhi), Delhi.  
79518

79520 **Ion-implantation in different phases of WO<sub>3</sub> for catalytic applications.:** Dr. Ahin Roy, IIT Kharagpur, West Bengal.

**11:00 – 11:15 BREAK**

*Session Chairperson:*

11:15 – 13:00

*Session II: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)*

79111 **High Energy Light Ion Irradiation and Its effect on Multijunction solar cell Performance.:** Dr. Bhanu Pratap Dhamaniya, U R Rao Satellite Centre, ISRO, Bengaluru, Karnataka.

79129 **Ion Beam Modification of PVDF based Nanocomposites for Enhancing sensor applications.:** Dr. Sudheendra Kulkarni, KLS Gogte Institute of Technology, Belagavi, Karnataka, Karnataka.

79207 **Understanding the Role of Ion Irradiation on Spin Frustrated Multiferroics.:** Mr. Chandan Mahapatra C/o. Prof. Anil Kumar Singh, NIT Rourkela, Odisha.

79235 **Growth, Characterisation, Ion Implantation and Irradiation on Gallium Oxide Single Crystal Wafers for Optoelectronic Application.:**  
& Mr. Divagar S C/o. Prof. R. Thangavel, IIT (ISM) Dhanbad, Jharkhand.  
79523

79242 **Investigation on magnetoelectric and magnetodielectric properties of multiferroic composites.:** Ms. Payalkumari Mathurbhai Savaliya C/o. Prof. Ashish R. Tanna, RK University, Rajkot-Bhavnagar Highway, Tramba, Rajkot, Gujarat.

79303 **Irradiation-Tuned Perovskite and Transition Metal Oxides: Green Synthesis Approach for Supercapacitor and Photocatalyst Development.:** Dr. Arti Hadap, MPSTME, SVKM's NMIMS Deemed to be University, Mumbai, Maharashtra.

79517 **Porous-activated carbon derived from biochar as a hydrogen storage material.:** Dr. Ram Krishna, NIT Jamshedpur, Jharkhand.

13:00 - 14:00 BREAK

Session Chairperson:

14:00 – 16:00

Session III: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79131 Study of irradiation induced modifications of Tellurium oxide based Nanomaterials for application in Gas Sensor.: Dr. Manoj Kumar Jaiswal, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, New Delhi, Delhi.

79233 Laser Treatment of Ion Irradiation Induced Defects in BST Films and Efficiency Comparison with Thermal Treatment.: Mr. Ateed Ahmad C/o. Prof. K. C. James Raju, CASEST School of Physics, University of Hyderabad, Gachibowli, Telangana.

79513 Laser Treatment of Ion Irradiation Induced Defects in BST Films and Efficiency Comparison with Thermal Treatment.: Prof. K. C. James Raju, CASEST School of Physics, University of Hyderabad, Gachibowli, Telangana.

79306 Effect of Heavy Ion Irradiation on Hydroxyapatite Nanostructures for Biomedical Applications.: Dr. G. Suresh Kumar, PSG College of Arts & Science, Coimbatore, Tamil Nadu.

79310 Tailoring the properties of 200MeV Ag<sup>15+</sup> swift heavy ion irradiation on silicon oxycarbide antimony nanocomposites for high performance Li-ion battery anodes.: Dr. D. Prem Anand, St. Xavier's College (Autonomous), Palayamkottai, Tirunelveli, Tamil Nadu.

79317 Understanding the physical metallurgy and radiation stability of Cu-Cr-Co-Fe-Ni high entropy alloy under energetic ion irradiation.: Dr. Jitendra Singh, Netaji Subhas University of Technology, Dwarka New Delhi, Delhi.

&  
79512

79322 Investigations on the performance of Hf<sub>1-x</sub>Zr<sub>x</sub>O<sub>2</sub> (x = 0.0 - 0.5) based memory devices using Oxygen ion implantation.: Dr. Malay Nitinkumar Udeshi, Marwadi University, Rajkot, Gujarat.

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79330 Engineering novel spin ladder compounds CaCu<sub>2</sub>O<sub>3</sub> (2-leg) and La<sub>2</sub>Cu<sub>2</sub>O<sub>5</sub> (4-leg) through irradiation for sensor and energy applications.: Prof. C. Sekar, Alagappa University, Karaikudi, Tamil Nadu.

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16:00 - 16:15 BREAK

Session Chairperson:

16:15 – 17:25

Session IV: BTR- 1, 2, 3, 4, 5/ BTR- 5 & 1, 2, 3 (8+2 Minutes)

79119 Understanding radiation response of oxide ceramic composites for nuclear relevance under swift heavy ions.: Dr. Vinita Grover Gupta, Bhabha Atomic Research Centre (BARC) Mumbai, Maharashtra.

79228 Development of Proton Based Neuromorphic Solid State Devices for Bio Monitoring.: Ms. Sompriti Bora C/o. Dr. Satya Prakash Pati, North-Eastern Hill University, Shillong, Meghalaya.

79519 Development of Proton Based Neuromorphic Solid State Devices for Bio Monitoring.: Dr. Satya Prakash Pati, North-Eastern Hill University, Shillong, Meghalaya.

79318 Ion Beam-Engineered Protonic Oxide Memristors for Low-Power Neuromorphic Computing and Biometric Signal Processing.: Dr. Satya Prakash Pati, North-Eastern Hill University, Shillong, Meghalaya.

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79315 Ion beam irradiated conducting Polyaniline/ MXene / Ferrite Ternary Nanohybrid composite films for supercapacitor application.: Dr. P. Jayamurugan, Sri Ramakrishna Mission Vidyalaya College of Arts And Science Coimbatore(Affiliated to Bharathiar University), Tamil Nadu.

79316 Implantation and Irradiation Driven Defect Control in In<sub>2</sub>O<sub>3</sub> Thin Films for Ultrasensitive, Room-Temperature Gas Detection.: Dr. Rishi Ranjan Kumar, School of Basic and Applied Sciences, K.R. Mangalam University, Gurugram, Haryana.

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79507

79319 Origin of larger clusters during electronic sputtering in nanocomposite.: Dr. Udai Bhan Singh, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh.

79521 Low energy ion irradiation induced coupled plasmonic nanostructures.: Dr. Udai Bhan Singh, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh.

79506 Low energy ion irradiation effects on thiourea and allylthiourea complex crystals for tunable nonlinear optical applications.: Dr. Sreekanth G, Muthoot Institute of Technology and Science (Autonomous), Kochi, Kerala.