



17th Biennial DAE-BRNS Symposium on Nuclear and Radiochemistry

NUCAR – 2025



Technical Programme

April 23 – 26, 2025

DAE Convention Centre

Anushaktinagar, Mumbai – 400 094

Technical Programme

Day 1: Wednesday, April 23, 2025	
08:00-09:30	Registration
09:30-10:30	Inaugural Function
10.30-11.00	Inauguration of Exhibition Stalls and High Tea
Session 1: (11:00 to 13:00)	
Session Chair: Dr. V. Venugopal & Co-Chair: Dr. A. V. R. Reddy	
IT-1	<i>Fabrication of Fast Reactor Fuels and their Characterization</i> Amrit Prakash, BARC, Mumbai.
IT-2	<i>Research and Development of Microsphere based Fuels for Advanced Reactor Concept</i> Rajesh V. Pai, BARC, Mumbai.
IT-3	<i>Development of Solvents for Nuclear Fuel Cycle</i> C. V. S. Brahmananda Rao, IGCAR, Kalpakkam.
IT-4	<i>New Methodologies and Substrates for the Assay of Actinides using NuclearRadiations</i> Rahul Tripathi, BARC, Mumbai.
Lunch (13:00 – 14:00)	

Session 2 (14:00 to 16:00)	
Poster Presentation	
A2, A3, A5, A7, B1, B2, B3, B4, B5, B6, B7 C1, C2, C3, C4, C6, C7, C8, C9, C10, C11, C13, C14, C15 D1, D2, D3, D4, D5, D7, D8 E1, E2, E3, E4, E5, E6, E7, E8, E9, E10 F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F39 G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18 I1, I2, I3, I5, I6, I7, I18	
Session 3: (16:00 to 18:00)	
Session Chair: Dr. K. L. Ramakumar & Co-Chair: Dr. Y. Balaji Rao	
ISP-1	<i>Direct Solid Sampling of Nuclear Materials for Chemical Quality Assurance – An Advanced ETV-ICP-OES Application</i> S. B. Deb, BARC, Mumbai.
ISP-2	<i>Development of Ion Chromatography as an Analytical Tool in the Nuclear Material Fabrication process at Nuclear Fuel Complex</i> Shehanaz Bano, Nuclear Fuel Complex, Hyderabad.
ISP-3	<i>Radiation Detection using Scintillators for Multiple Applications</i> Liviu Matei, MSAG, Fisk University, USA.
Oral Presentations	A-1, B-9, D-23, F-31, I-4, H-1
Dinner 19.00 onwards	

Day 2: Thursday, April 24, 2025	
Session 4 (9:30 to 10:30)	
Session Chair: Dr. S. K. Aggarwal & Co-Chair: Dr. A. C. Bhasikuttan	
IT-5	<i>High-Precision Mass Spectrometry Methods for Environmental Radionuclide Analysis</i> Nobert Kavasi, Fukushima Institute for Research, Education and Innovation (F-REI), Japan
IT-6	<i>Isotopic Separations at Heavy Water Board</i> Ajit R. Dusane, Heavy Water Board, Mumbai.
Tea Break (10:30– 11:00)	
Session 5 (11:00 to 13:00)	
Dr. M. V. Ramaniah Book Release & IANCAS Award Ceremony	
Lunch (13:00 – 14:00)	
Session 6 (14:00 to 16:00)	
Poster Presentation	
A8, A10, A11, A12 B8, B10, B11, B12, B13, B14, B15 C16, C17, C18, C19, C21, C22, C23, C24, C25, C26, C27, C29, C30, C35, D9, D10, D11, D13, D14, D15, D16 E11, E12, E13, E14, E15, E16, E17, E18, E19, E20 F15, F16, F17, F18, F19, F21, F22, F23, F24, F25, F26, F27, F28, F30, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G34, G35, G36, G37 H2, I8, I9, I10, I11, I12, I13	
Session 7 (16:00 to 18:00)	
Session Chair: Dr. B.S. Tomar & Dr. C.N. Patra	
IT-7	<i>The Approaches to Design the Ligands for Separation of f-elements</i> V. G. Petrov, Lomonosov Moscow State University, Russia.
Oral Presentations	A-4, A-6, C-5, C-12, C-20, D-6, D-12, D-24, G-33
18.00-19.30	Presentations by IANCAS Awardees
Dinner by IANCAS 19.30 onwards	

Day 3: Friday, April 25, 2025	
Session 8 (9:30 to 11:00)	
Session Chair: Dr. P. K. Mohapatra & Co-Chair: Dr. P. A. Hassan	
IT- 8	<i>Production and Applications of Radioisotopes at RIKEN RI Beam Factory– Search for New Elements through Therapy of Cancer</i> H. Haba, Nishina Center for Accelerator-Based Science, RIKEN, Japan.
IT-9	<i>Physics Safety and Utilization Aspects of Research Reactors</i> Tej Singh, BARC, Mumbai.
IT-10	<i>Climate Change Impacts on Global Water Resources – Role of Nuclear Techniques</i> Chidambaram S., Kuwait Institute for Scientific Research, Kuwait.
Tea Break (11:00 – 11:30)	
Session 9 (11:30 to 13:00)	
Session Chair: Dr. P. K. Pujari & Co-Chair: Dr. Smeer Durani	
IT-11	<i>Delayed Molecular Hydrogen Production in Portlandite Under Irradiation: Reaction Mechanisms and Consequences for the Storage of Radioactive Waste</i> Sophie Le Caer, Université Paris-Saclay, France.
ISP-4	<i>Calibration Free Laser Ablation Molecular Isotopic Spectrometry – A New Outlook to the Isotopic Composition Determination of Boron</i> Arnab Sarkar, BARC, Mumbai.
ISP-5	<i>Dynamics of Neck-Rupture in Nuclear Fission using Particle Emission as a Probe</i> Y. K. Gupta, BARC, Mumbai.
ISP-6	<i>Nuclear Instrumentation and Application of AI</i> P. P. Shete, BARC, Mumbai.
Lunch (13:00 – 14:00)	

Session 10 (14:00 to 16:30)	
Session Chair: Dr. A. R. Joshi & Co-Chair: Dr. Umesh Kumar	
Presentation by Exhibitors	
Oral Presentations	A-9, C-28, D-20, F-20, F-29, G-54, G-57
Session 11 (16:30 to 18:00)	
Poster Presentation	
A13, A14, A15, A16, A17 B16, B17, B18, B19, B20, B21, B22 C31, C32, C33, C34, C36, C37, C38, C39, C40, C41, C42, C43 D17, D18, D19, D21, D22, D25, D26 E21, E22, E23, E24, E25, E26, E27, E28, E29, E30 F32, F33, F34, F35, F36, F37, F38, F40, F41, F42, F43, F44, F45, F46 G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G55, G56 H3, H4, I14, I15, I16, I17, I19, I20	
Dinner 19.00 onwards	

Day 4: Saturday, 26 April, 2025	
Session 12 (9:30 to 11:00)	
Session Chair: Dr. N. Sivaraman & Shri M.K. Saxena	
IT-12	<i>Back End Fuel Cycle- Status and Current Trends</i> Madhuri Shetty, BARC, Mumbai.
IT-13	<i>Recent Advances in Nuclear Waste Management Practices in India</i> D. Banerjee, BARC, Mumbai.
IT-14	<i>Advanced Materials for Selective Capture and Removal of Radionuclides in Nuclear Waste Management</i> Debajit Sarma, IIT Patna, Patna
Tea Break (11:00 – 11:30)	
Session 13 (11:30 to 13:00)	
Session Chair: Dr. S. Kannan & Dr. Amrit Prakash	
IT-15	<i>Development of Fluoride based Salts for Molten Salt Reactor</i> S. C. Parida, BARC, Mumbai.
ISP- 7	<i>Molten Salt-based Electrochemical De-oxidation of Uranium and Thorium Oxides</i> R. Kumaresan, IGCAR, Kalpakkam.
ISP- 8	<i>Fissile Zone Identification System(FIZIDS)</i> K. Sundararajan, IGCAR, Kalpakkam.
ISP- 9	<i>Development of Potentiometric Sensors for Lanthanides and Actinides</i> Bholanath Mahanty, BARC, Mumbai.
Lunch (13:00 – 14:00)	

Session 14 (14:00 to 15:30)	
Session Chair: Prof. V.K. Manchanda & Dr. Y.K. Bhardwaj	
IT -16	<i>Regulatory Clearance and Hot Commissioning Experience of DFRP</i> K.Rajan, IGCAR, Kalpakkam.
ISP-10	<i>Recent Advances in Industrial Applications of Radiotracers for Process Optimization in Glass Production and Waste Water Treatment</i> Jayashree Biswal, BARC, Mumbai.
ISP-11	<i>Medical Cyclotrons: An Essential Need for Cancer Management</i> M. R. A. Pillai, Ex- BARC, Mumbai
ISP-12	<i>Radiolabeled Somatostat in Analogs for Diagnosis and Therapy of Neuroendocrine Cancers: In-house Synthesis, Quality Control and Preliminary Clinical Investigation</i> V. Kusum Vats, BARC, Mumbai.
15.30 to 17.00: Panel Discussion and Valedictory Function	



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