



**Twelfth DAE-BRNS Biennial Symposium on
Emerging Trends in Separation Science and Technology (SESTEC-2026)**
(DAE Convention Centre, Anupuram, IGCAR, Kalpakkam)
February 11 - 14, 2026

Technical Program

Wednesday, February 11, 2026	
8.30 – 9.30	Registration
9:30-10:30	Inaugural Session Inauguration & Key note presentation By <i>Shri G. Sreekumar Pillai, Director, IGCAR, Kalpakkam</i> ASSET Award Presentation Ceremony Group Photo and High Tea
10:30-11:00	Session 1 Chair: <i>Dr. Y.K. Bhardwaj, Associate Director, RC&IG, BARC, Mumbai</i>
11.00 -12:45	11:00-11:35 PL-1 : Radio-Cesium Separation Strategies for Nuclear Fuel Cycle Applications <i>Prof. P.K. Mohapatra, Ex-BARC</i>
	11:35-12:10 PL-10: Novel Reactions and Separations for Actinide Halides & Their Implications for the Nuclear Fuel Cycle <i>Prof. K.R. Czerwinski, USA</i>
	12:10-12:45 PL-3: Radioisotope Production in Fast Breeder Test Reactor <i>Dr. K. Sundararajan, IGCAR</i>
12:45-14.00	Lunch
14.00 - 15.30	Session 2A Chair: <i>Dr. Rajesh Ganesan, Associate Director, FMCG, MC&MFCG, IGCAR</i>
	IT-01: Molecular-Level Understanding of Sorption and Extraction Processes: Ionic Liquids and Deep Eutectic Solvents for Advanced Separation Science <i>Prof. Ramesh Gardas, IITM</i>
	IT-02: Functionalized Polyurethane Foams - Promising Applications in Separation Processes <i>Prof. A. Sivaramakrishna, VIT, Vellore</i>
	IT-14: Sea Bittern-Driven Forward Osmosis; Exploiting High Osmotic Pressure for Dewatering of Coconut Water <i>Prof. Parag Nemade, ICT, Mumbai</i>
14.00 - 15.30	Session 2B Chair: <i>Prof. D. Prabhakaran, VIT, Vellore</i>
	IT-04: Diffusion and Sorption behavior of tracers on Ferromontmorillonite relevant to deep geological disposal of HLW <i>Prof. J. Manjanna, RC University, Belagavi</i>
	IT-05: Radiometallic Isotopes such as ⁶⁴ Cu-Copper, ⁸⁹ Zr-Zirconium, ⁴⁵ Ti-Titanium and ⁶⁸ Ga-Gallium: Production, Purification and Quality Assurance: Our Experience <i>Prof. Manish Dixit, IMS, Lucknow</i>
	IT-06: Experimental and Theoretical Studies on Lanthanide and Actinide Speciation in Aqueous Environments – A Thermodynamic Prospective <i>Dr. Rama Mohana Rao Dumpala, BARC</i>
15:30-15:45	Tea Break
15:45-17:45	Session 3 Oral Presentations Chair: <i>Dr. Anish Kumar, Director, MMG, IGCAR</i>
	A-3, A-4, A-11, A-12, A-16, A-19, A-22, G-1, G-7, G-11, H-3, H-4
15:45-17:45	Session 3B Oral Presentations Chair: <i>Dr. Y. V. Nanchariah, BARCF, IGCAR</i>
	B-1, B-4, B-5, B-6, C-1, C-2, D-1, D-2, D-3, E-2, E-3, E-4
17:45-18:30	Presentations by ASSET Awardees
19:00-21:00	Dinner
Thursday, February 12, 2026	
9:30-11:10	Session 4 Special session on Reprocessing of Fuels Chair: <i>Dr. V. Jayaraman, Director, MC&MFCG & RpG, IGCAR</i>
	9:30-10:05 PL-4: Separation Science and Technology at Backend of Fuel Cycle: Current Status and Way Forward <i>Dr. G. Sugilal, BARC</i>
	10:05-10:40 PL-5: Advanced Process Flow-sheet for Fast Reactor Fuel Reprocessing <i>Dr. K.A. Venkatesan, IGCAR</i>
10:40- 11:10	IT-07: Pyrochemical Reprocessing Technology for Metal Fuel Fast Reactors: Development Status and Deployment Plans <i>Shri S.P. Ruhela, IGCAR</i>
11:10-11:15	Tea Break

11:15-13:05		Session 5 <i>Chair: Dr. S. Kannan, Homi Sethna Chair, DAE & Former Director, RC&IG, BARC</i>	
	11:15-11:45	IT-08: Current Strategies for Americium Recovery from High-Level Waste: International Scenario <i>Dr. S.A. Ansari, BARC</i>	
	11:45-12:15	IT-9: Advancements in Separation Science and Technology in Nuclear Fuel Cycle and its Implications on Sustainability and Circularity of the Nuclear Power and Waste Management Program <i>Dr. G. Suneel, BARC</i>	
	12:15-12:35	Technical Invited Talk New trends in ICP-OES <i>Shri R. Karthikeyan, Technical Manager, Advance Scientific Equipments Pvt Ltd</i>	
	12:35-13:05	IT-10: Process Chemistry of Fast Reactor Fuel Reprocessing and Recovery of Valuables from Fast Reactor Waste <i>Dr. K. Dhamodharan, IGCAR</i>	
13:05-14:00		Lunch	
		Session 6	
14:00-16:00		Poster presentation & Floating Tea A1, A-2, A-5, A-6, A-7, A-8, A-9, A-10, A-13, A-14, A-15, A-17, A-18, A-20, A-21, A-23, A-24, A-26, A-27, A-29, A-30, A-31, A-33, A-37, A-39, A-40, B-2, B-3, B-7, B-10, B-11, B-12, C-4, D-4, D-10, D-11, D-13, D-14, D-15, E-1, E-5, E-9, E-10, E-11, E-13, F-1, F-2, F-3, G-2, G-3, G-4, G-5, G-6, G-8, G-9, G-10, H-1, H-2, H-6, H-8	
		Session 7	
		Session 7A Oral Presentations <i>Chair: Dr. A. Suresh, Former Head, FChD, IGCAR</i>	Session 7B Oral Presentations <i>Chair: Shri Geo Matthews, Associate Director, RpSG, RpG, IGCAR</i>
16:00-18:00		A-25, A-28, A-32, A-34, A-35, A-38, G-12, G-13, G-14, G-15, H-5, H-7	B-8, B-9, B-14, C-3, C-6, D-5, D-6, D-7, E-6, E-7, E-8, F-4
18:00 onward		Floating Tea/ Cultural Program and Dinner	
Friday, February 13, 2026			
9:30-11:10		Session 8 <i>Chair: Prof. V.K. Manchanda, Former Head, RCD, BARC</i>	
	9:30-10:05	PL-6: The vital Role of Radioisotope Separation Science in Nuclear Medicine <i>Dr. Madhav B. Mallia, BARC</i>	
	10:05-10:40	PL-7: Engineering of Solvent Extraction Process Development <i>Shri K.T. Shenoy, Homi Sethna Chair, DAE</i>	
	10:40-10:50	Technical Talk-1	
	10:50-11:00	Technical Talk-2	
	11:00-11:10	Technical Talk-3	
11:10-11:30		Tea Break	
		Session 9	
11:30-13:00		Session 9A <i>Chair: Shri K. Rajan, Former Director, RpG, IGCAR</i>	Session 9B <i>Chair: Shri J. Kodandaraman, Head, PDRHCSD, RpG, IGCAR</i>
	11:30-12:00	IT-11: Processing of Uranium Ore at UCIL Mills of India <i>Dr. J. Dinesh Kannan, UCIL</i>	IT-03: Extraction of Critical Minerals - Breaking the Bottleneck <i>Dr. Benedict Rakesh, CSIR-IMMT, Bhubaneswar</i>
	12:00-12:30	IT-12: From Ores to Wastes: Integrated Strategies for Sustainable Recovery of Rare Earth Elements <i>Prof. D.K. Singh, IIT(ISM), Dhanbad</i>	IT-15: Density Functional Theory Studies on the Separation and Recovery of Lanthanides and Actinides <i>Dr. G. Gopakumar, IGCAR</i>
	12:30-13:00	IT-13: Innovative Approaches for Managing Complex Radioactive and Mixed Wastes <i>Dr. S. Sriram, Canada</i>	IT-16: Diverse Applications of Polyoxometalates (POMs) in the Field of Actinides <i>Dr. B. Mahanty, BARC</i>
13:00-14:00		Lunch	
		Poster presentation & Floating Tea A-41, A-43, A-45, A-46, A-47, A-48, A-49, A-52, A-55, A-56, A-57, A-58, A-59, A-60, A-61, A-62, A-63, A-64, A-65, A-66, A-67, A-69, A-70, A-71, A-72, B-13, B-18, B-19, B-20, B-21, B-22, C-5, C-7, D-16, D-17, D-21, D-22, D-23, E-15, E-17, E-18, E-20, E-21, E-22, E-23, F-5, F-6, F-7, G-16, G-19, G-20, G-21, G-22, G-23, G-24, G-26, H-9, H-11, H-12, H-13	
		Session 10	
		Session 10A Oral Presentations <i>Chair: Dr. P.G. Jaison, Head, RACD, BARC</i>	Session 10B Oral Presentations <i>Chair: Prof. P. Sri Ranganathan, Rani Anna Govt. College, Tirunelveli</i>
16:00-18:00		A-42, A-44, A-50, A-51, A-53, A-54, A-68, G-17, G-18, G-25, H-10	B-15, B-16, B-17, C-8, C-9, D-8, D-9, D-18, D-19, E-12, E-14, E-16
19:30		Dinner	
Saturday, February 14, 2026			
9:30-11:15		Session 11 <i>Chair: Prof. N. Sivaraman, Former Director, MC&MFCG, IGCAR</i>	
	9:30-10:05	PL-8: Application of Ion Exchange Chromatography to establish SI Traceability in Certified Reference Materials (CRMs) of Bio-molecules <i>Dr. K. Dash, BARC</i>	
	10:05-10:40	PL-9: Polymer Inclusion Membranes and Beads in Environmentally Friendly Chemical Separation <i>Prof. S.D. Kolev, Australia</i>	
	10:40-11:15	PL-2: Separation Technologies in Advanced Nuclear Fuel Cycle <i>Shri Kalyan Bhanja, BARC</i>	
11:15-11:30		Tea Break	

11:30-13:20		<i>Session 12</i>	
		<i>Session 12A</i> <i>Chair: Shri T. V. Prabhu, Associate Director, MFRG, MC&MFCG, IGCAR</i>	<i>Session 12B</i> <i>Chair: Shri S. Chandramouli, Associate Director, FRTG, IGCAR</i>
	11:30-12:00	IT-17: Advanced Functionalized Porous Monolithic Materials: Enabling Next-Generation Separation and Sensing Technologies <i>Prof. Akhila Maheswari, VIT, Vellore</i>	11:30-11:50 SIT-01: Application of Cloud Point Extraction (CPE) in Various Fields of the Nuclear Industry <i>Dr. Abhijit Saha, BARC</i>
	12:00-12:30	IT-18: Synthesis and Evaluation of Novel Functionalized Metal-organic Frameworks for the Recovery of Metal Ions <i>Dr. B. Sreenivasulu, IGCAR</i>	11:50-12:10 SIT-02: Speciation of f-elements for Sustainable Growth of Nuclear and Renewable Energy <i>Dr. Ashutosh Srivastava, BARC</i>
	12:30-13:00	IT-19: Recent Advancement in the Chemical Characterization of (U, Pu)O ₂ MOX fuel <i>Dr. Anoop Kelkar, BARC</i>	12:10-12:30 SIT-03: Alternate Ligand – Solvent System For PUREX Process <i>Dr. Arya Das, BARC</i>
			12:30-12:50 SIT-04: Role of DFRP in Closing the Fast Reactor Fuel Cycle <i>Shri. R Velmurugan, IGCAR</i>
13.20-14.15		<i>Lunch</i>	
		<i>Session 13</i>	
14:15-14:35		<i>Overview on BRNS Activities</i> <i>Shri D. Mathur, BRNS</i>	
14:35-15:00		<i>Panel Discussion</i>	
15:00-16:00		<i>Valedictory Session</i> <i>Valedictory Address</i> <i>By Shri S. Satyakumar, Chairman & Chief Executive, Heavy Water Boad</i>	