

**Report on 108<sup>th</sup> DAE-BRNS-IANCAS National Workshop on  
“Radiochemistry and Applications of Radioisotopes”  
at  
Department of Chemistry,  
National Institute of Technology Sikkim, Ravangla, Namchi 737139  
February 5-10, 2024**

The 108<sup>th</sup> DAE BRNS-IANCAS National Workshop on Radiochemistry & Applications of Radioisotopes was jointly organized by IANCAS and the Department of Chemistry, National Institute of Technology Sikkim during February 5 – 10 , 2024. Dr. Arnab Sarkar, Fuel Chemistry Division, and Dr. Dhanadeep Dutta, Radiochemistry Division were the Workshop Coordinator and the Practical Coordinator, respectively. Dr. A.N. Biswa, Head, Dept. of Chem. the Department of Chemistry was the local Coordinator, and Dr. A. Biswas was the Co-Convenor of this workshop. The Workshop hosted 40 selected participants from NIT, Sikkim, each receiving a set of two books (IANCAS publications) on Fundamentals of Radiochemistry and Experiments in Radiochemistry.

The inaugural ceremony was graced by Chief Guest Prof. M.C. Govil, Director of NIT Sikkim, who delivered an address emphasizing the significance of the Workshop. Dr. Sarkar expressed his optimism regarding the Workshop, highlighting its role in providing hands-on training and updating participants on the latest developments in Radiochemistry and Radioisotopes. Dr. S.C. Parida, Head PDD, BARC delivered a keynote address online, discussing India's current power situation and the role of nuclear energy.

Subsequent days featured lectures by renowned scientists from BARC, Mumbai, covering various aspects of radiochemistry and applications of radioisotopes (Technical program enclosed). Practical sessions on the safe handling of radioactivity with nuclear detectors were conducted in the afternoons.

The valedictory session was chaired by Dr. Y.K. Bhardwaj, Head, RTDD, BARC. A quiz competition, based on workshop lectures and experiments, was organized which was well received by the participants. Outstanding performers in the quiz completion received gifts, and participants shared their impressions on the workshop. Dr. Sarkar addressed feedback and highlighted collaborative research opportunities at BARC through BRNS funding. All participants received certificate of participation.

In a gesture of appreciation, Y.K. Bhardwaj donated a G-M counter along with a source to NIT Sikkim on behalf of IANCAS. Dr. A. Biswas, Head, Dept. of Physics, delivered the vote of thanks, marking the conclusion of the National Workshop.

Arnab Sarkar  
Workshop Coordinator

<b>TECHNICAL PROGRAMME</b>	
<b>Keynote address (Online)</b>	Dr. S.C Parida, Head, PDD
<b>L1:</b> Introduction to Radioactivity and Decay	Dr. Arnab Sarkar
<b>L2:</b> Interaction of radiation with matter	Dr. Dhanadeep Dutta
<b>L3:</b> Nuclear reactors	Dr. Arunasis Bhattacharyya
<b>L4:</b> Application of radioisotopes in health care	Dr. Suresh Subramanian
<b>L5:</b> Radiation detection and measurement	Dr. Dhanadeep Dutta
<b>L6:</b> Production of radioisotopes	Dr. Suresh Subramanian
<b>L7:</b> Nuclear structure and stability (Online)	Dr. Suparna Sodaye
<b>L8:</b> Radiation chemistry	Sh. Pratik Das
<b>L9:</b> Application of Radioisotopes in Hydrology & Environmental Studies	Dr. Sitangshu Chatterjee
<b>L10:</b> Chemistry of trans-uranic elements	Dr. Arunasis Bhattacharyya
<b>L11:</b> Application of Radioisotopes in Industry	Dr. Sitangshu Chatterjee
<b>L12:</b> Nuclear Waste Management	Sh. Pratik Das
Introduction to Experiments	Dr. Dhanadeep Dutta & Sh. Sandip Vishwasrao
Validation Lecture	Dr. Y.K. Bhardwaj

<b>Resource Persons</b>	
1. Dr. Arnab Sarkar	FCD
2. Dr. D. Dutta	RCD
3. Dr. A. Bhattacharyya	RCD
4. Dr. Suresh Subramanian	RPhD
5. Dr. Sitangshu Chatterjee	IRAD
6. Mr. Pratik Das	PDD
7. Mr. Sandip Vishwasrao	PDD
8. Mr. Amol Patil	FCD

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