

**INDIAN ASSOCIATION FOR NUCLEAR CHEMISTS AND ALLIED SCIENTISTS
(IANCAS)
Annual Report
(2023-2024)**

Dear IANCAS members,

I welcome you all in the 44th Annual General Body Meeting of IANCAS. It gives me immense pleasure to present the details of activities of the Association during the period April 1, 2023 to March 31, 2024.

1. Membership

The Association has 1972 life members (LMs) and 19 corporate members as on March 31, 2024. During the last financial year, 31 new life-memberships have been granted.

2. IANCAS Workshops

2.1. 106th National Workshop at SVNIT, Surat during January 8 – 12, 2024

The 106th DAE-BRNS-IANCAS National Workshop on “Radiochemistry and Applications of Radioisotopes” was organized at Department of Physics, SVNIT, Surat during January 8-12, 2024. Dr. Suparna Sodaye was the Workshop coordinator, and Dr. Dipika Patel, Department of Physics, SVNIT, Surat was the convenor for the Workshop. Dr. Smitha Manohar, Director, NRG, BARC inaugurated the Workshop, and Dr. Usha Pandey, GM, BRIT was the chief guest at the valedictory function. This Workshop was special because all the resource persons from BARC and the local organizing team were all women contributing to science.

A total of 48 registered participants attended the Workshop, which included the faculty members and research scholars from SVNIT, Surat, and 15 participants from different institutes like Rajiv Gandhi University-Itanagar, Osmania University-Hyderabad, IISER-Bangalore, TMC-Varanasi and MSU-Vadodara.

In the inauguration session, Dr. Smitha Manohar presented an overview of the Department of Atomic Energy, India, emphasising the importance of Radiochemistry and Radioisotopes for peaceful applications. Later on, she also delivered a keynote address on the topic “Nuclear Fuel Cycle – Indian Perspectives”. In the valedictory function, Dr. Usha Pandey urged the participants to apply radioisotopes in their research work. She also appealed to the participants for conveying the information about the societal benefits of nuclear energy and radioisotopes to the general public. On behalf of IANCAS, she also donated a GM counter and a NaI(Tl) detector system to the Dept. of Physics, SVNIT, Surat. The Workshop was well covered by the local media, covering the prominent places in Hindi and Gujarati news papers.

2.2. 107th National Workshop at Kochi University of Science and Technology, Cochin during January 22 – 27, 2024

The 107th DAE-BRNS-IANCAS National Workshop on “Radiochemistry and Applications of Radioisotopes” was jointly organized by IANCAS & Department of Physics, Cochin

University of Science and Technology (CUSAT), Kochi, Kerala during January 22-27, 2024. Dr. Madhava B. Mallia, RPhD, BARC was the coordinator, and Dr. Rhine Kumar, Department of Physics, CUSAT was the convener of the Workshop. There were 61 registered participants including faculty members and research scholars from various departments of CUSAT and other institutes in Kerala, Tamil Nadu and Orissa.

The Workshop was inaugurated by Prof. P.G. Sankaran, Hon. Vice Chancellor, CUSAT and Dr. S. Kannan, Vice-President, IANCAS. In his inaugural address, Prof. Sankaran applauded the efforts taken by the Department of Physics to conduct the IANCAS Workshop, and emphasized on the importance of radioisotopes, especially for health care applications. Dr. S. Kannan briefly described the activities of IANCAS. Later, he delivered a keynote address presenting the overview of the Department of Atomic Energy, India. In his address, he mainly emphasized on the applications of the radioisotopes in healthcare and food security.

The valedictory function of the workshop was attended by Dr. P. K. Mohapatra, Associate Director, Radiochemistry and Isotope Group, BARC. Dr. Mohapatra addressed the gathering, and explained the opportunities available in the Department of Atomic Energy, India, in general, and BARC in particular. On behalf of IANCAS, a set of two radiation detector systems, NaI(Tl) detector and G.M. Counter, was donated to the host institute for their academic use. The Workshop was concluded with a vote of thanks by Dr. Rhine Kumar, CUSAT. The Workshop was well covered by the local news papers.

2.3. 108th National Workshop at NIT Sikkim during February 5 – 10, 2024

The 108th DAE-BRNS-IANCAS National Workshop on “Radiochemistry and Applications of Radioisotopes” was jointly organized by IANCAS & Department of Chemistry, NIT Sikkim during February 5–10, 2024. Dr. Arnab Sarkar was the Workshop coordinator, and Dr. A. N. Biswa, Head, Department of Chemistry was the local coordinator. 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 the Chief Guest, Prof. M.C. Govil, Director, NIT Sikkim, who delivered an address emphasizing the significance of the Workshop. Dr. S.C. Parida, Head PDD, BARC delivered a keynote address online, discussing India's current power situation, and role of the nuclear energy for the development of the country. Subsequent days featured lectures by renowned scientists from BARC, Mumbai, covering various aspects of radiochemistry and applications of radioisotopes.

The valedictory session was chaired by Dr. Y. K. Bhardwaj, Head, RTDD, BARC. In a gesture of appreciation, on behalf of IANCAS, Dr. Bhardwaj donated a GM counter system to NIT Sikkim. Dr. A. N. Biswa, Head, Department of Chemistry, NIT Sikkim delivered the vote of thanks, marking the conclusion of the workshop.

2.3. School / College Workshops

During the reported period, IANCAS conducted one day college Workshop at P.P. SAVANI University (PPSU), Surat on Saturday, January 13, 2024. Dr. Suparna Sodaye, Dr. Archana Mukherjee, Dr. Dhanadeep Dutta and Dr. Seraj Ansari were the resource persons. Graduate

students from Physics, Chemistry and Biotechnology Departments of the university participated in this Workshop.

3. IANCAS Bulletins

During the reported period, IANCAS published **Four** Thematic Bulletins given below.

Volume and Date	Title of the Bulletin	Guest Editor(s)
XIX (1) June 2023	The Multifaceted Application of Glasses: From Basic Science to Industries	Dr. S.N. Achary & Dr. Manoj Mohapatra
XIX (2) September 2023	Design, Development and Applications of Radiopharmaceuticals - Part I	Dr. Tapas Das & Dr. M.B. Mallia
XIX (3) December 2023	Scintillator in Radiation Detection	Dr. Mohit Tyagi & Dr. Kathi Sudarshan
XIX (4) March 2024	Science and Technologies in Nuclear Fuel Cycle	Dr. Gitender Singh, Dr. V.K. Mittal & Shri R.B. Bhatt

4. IANCAS Annual Awards

IANCAS awards for the **Year 2022** were bestowed in the inaugural session of NUCAR-2023 on 1st May 2023. The Awardees are:

Dr. M.V. Ramaniah Memorial Award	:	Dr. M.R.A. Pillai Former Head, Radiopharmaceuticals Division, BARC.
Dr. Tarun Datta Memorial Award	:	Dr. Rakesh R. Shukla Chemistry Division, BARC
		Dr. N. Sowmya Dept. of Physics, Government College for Women, Kolar, Karnataka
Prof. H.J. Arnika Best PhD Thesis Award	:	Dr. Sumit Pahan Process Development Division, Nuclear Recycle Group, BARC
Dr. K.S. Venkateswarlu Endowment Lecture Award 2022		Dr. T.V. Krishna Mohan Head, Water and Steam Chemistry Division & Facility Director, BARC Facilities, Kalpakkam.

Dr. A. K. Mohanty, Director, BARC presented the citations and medals to the awardees. Dr. M. R. A. Pillai thanked IANCAS for the honor in his short award acceptance speech. Other awardees also thanked IANCAS for the honor, and presented a gist of their R&D contributions in a special session of NUCAR-2023.

5. IANCAS co-organized NUCAR-2023

The 16th DAE-BRNS Biennial Symposium on Nuclear and Radiochemistry (NUCAR-2023) was organized by BARC in association with IANCAS at the DAE Convention Centre, Anushaktinagar, Mumbai during May 1 – 5, 2023. The symposium was inaugurated by Dr. A. K. Mohanty, Director, BARC. Dr. S. Kannan, Director, RC&I Group & Chairman,

Organizing committee, and Dr. P. K. Mohapatra, Associate Director, RC&I Group & Co-Chairman, Organizing Committee were present at the inauguration function. About 380 delegates from various DAE institutes, universities, national laboratories participated in the symposium.

The scientific programme of the symposium included 2 plenary talks, 11 invited talks by eminent scientists from India and overseas and 11 invited short presentations by young scientists. Out of 356 selected contributory papers, 34 oral and remaining poster presentations were delivered by young researchers pursuing PhD. In order to commemorate the Platinum Jubilee year of Indian Atomic Energy commission, a special Theme Meeting on “Role of basic Sciences in the Progress of Atomic Energy in India” was organized on the third day of the symposium. The Meeting was chaired by Dr. R. Chidambaram, Former Chairman, AEC, India. In the valedictory session of NUCAR-2023, IANCAS conferred 24 Best paper presentation awards to the young researchers that comprised Rs. 2000/- cash and a certificate.

6. First School on Nuclear & Radiochemistry (SONAR-1)

The first “School on Nuclear and Radiochemistry” (SONAR-1) fully sponsored by IANCAS was organized at the DAE Convention Centre, Anushaktinagar, Mumbai during April 29 – 30, 2023. Dr. Rajesh Pai was the convener, and Dr. Pranaw Kumar was the secretary of SONAR-1. The participation response for SONAR-1 was enormous as more than one hundred applications were received. However, due to logistic limitations, only 50 participants including young faculty members and research scholars were selected from all over the country.

The school was inaugurated by Dr. P.K. Pujari, President, IANCAS. The technical program of the SONAR-1 comprised of eight lectures covering the topics: Introduction to nuclear and radiochemistry, Interaction of radiation with matter, Radiation detection and measurements, Introduction to nuclear reactors, Application of radioanalytical techniques, and Radioisotope production, and their applications in health care, food and industry. The practical session included three experiments viz. radiation detection with G.M. counter and NaI(Tl) detector, separation of uranium and thorium, and Radio-Immuno assay.

In the valedictory function, each participant was given a participation certificate along with the IANCAS Book “*Fundamentals of Radiochemistry*”. Both, the technical programme and the experimental session of SONAR-1 were very much appreciated by the participants. Based on several requests in the feedback session, it was proposed to include a half-day visit to BARC facilities or RMC for the participants in the upcoming SONAR.

7. Annual Reports (2023-24) of IANCAS Regional Chapters

7.1. Activities of Southern Region Chapter (SRC)

IANCAS-SRC at IGCAR, Kalpakkam conducted “Nuclear and Radiochemistry Workshops” at Schools and Colleges.

7.2. Activities of Northern Region Chapter (NRC)

- IANCAS-NRC at Khalsa College Amritsar conducted “Nuclear and Radiochemistry Workshop” at schools and colleges.
- Due to completion of the Executive Committee term, election was conducted by the NRC to elect a new Executive Committee for the term April 2024 – March 2027. The office bearers of new Executive Committee of NRC are as follows:

No.	Name	Post	Affiliation
1.	Dr. J.S. Gandhi	President	Khalsa College Amritsar
2.	Dr. M.S. Batra	Vice-President	Khalsa College Amritsar

3.	Dr. Taminder Singh	Secretary	Khalsa College Amritsar
4.	Dr. Joga Singh	Joint Secretary	Khalsa College Amritsar
5.	Dr. Vijay Kumar	Treasurer	Hindu College Amritsar
6.	Dr. Gursharan Kaur	Member	Khalsa College Amritsar
7.	Dr. B.S. Bajwa	Member	G.N.D.U., Amritsar
8.	Dr. Jasjit Randhawa	Member	Khalsa College Amritsar
9.	Dr. Gurinder Singh	Member	Khalsa College Amritsar
10.	Dr. Sameer Kalia	Member	D.A.V. College, Amritsar

7.3. Activities of Tarapur Chapter

Due to completion of the Executive Committee tenure, election was conducted by the Tarapur Chapter to elect a new Executive Committee for the term April 2024 – March 2027. The office bearers of new Executive Committee are as follows:

No.	Name	Post
1.	Shri R.B. Bhatt	President
2.	Dr. Vinit Kumar Mittal	Secretary
3.	Dr. Gitender Singh	Treasurer
4.	Dr. T.P. Valsala	Member
5.	Dr. Anoop Kelkar	Member
6.	Shri. A. Baburajan	Member
7.	Dr. N.S. Rathore	Member
8.	Shri. B. Swain	Member
9.	Dr. Ashish Pandey	Member
10.	Smt. Amrita Dhara	Member

7.4. Activities of Eastern Region Chapter (ERC)

IANCAS-ERC has organized a one-day outreach workshop on “Processing of Materials and Applications” at Sri Sri University, Cuttack on 23rd September 2023. The technical talks were delivered by Dr. P. K. Mohapatra (RCD, BARC), Professor K. K. Nanda (IOP, Bhubaneswar), Dr. S. N. Sarangi (IOP, Bhubaneswar), Dr. R. Acharya (RCD, BARC) and Dr. B. Mallick (IOP, Bhubaneswar) after the inaugural meeting. IANCAS-ERC has extended support to IANCAS (Head Office) for the smooth organization of the “DAE-BRNS” Outreach Theme Meeting – “Societal Applications of Nuclear Science and Technology” held at GM University, Sambalpur during 23-25 November, 2023.

The office bearers of the Executive Committee of IANCAS-ERC are as follows:

No.	Name	Post
1.	Prof. K. K. Nanda	President
2.	Dr. S. N. Sarangi	Vice-President
3.	Dr. S. K. Biswal	Vice-President
4.	Dr. B. Mallick	Secretary
5.	Dr. A. N. Acharya	Joint Secretary
6.	Mr. B. Behera	Treasurer

ACKNOWLEDGEMENTS:

IANCAS is indebted to Dr. A. K. Mohanty, Chairman, AEC & Secretary, DAE, and Shri Vivek Bhasin, Director, BARC for their continuous support and encouragement. Thanks to BRNS for the financial support to sustain the activities of the Association. IANCAS thanks its Patron Dr. Anil Kakodkar, former Chairman, AEC & Secretary DAE for his support and encouragement. IANCAS acknowledges the dedicated efforts of its Workshop team, resource persons, guest editors and contributors for thematic bulletins. We would like to thank IANCAS regional chapters for their contributions towards the outreach programme of the Association across the country. IANCAS also thanks office staff as well as the supporting staff of Radiochemistry and Isotope Group for their help and support.

(S. K. Sharma)
General Secretary