



111th DAE BRNS-IANCAS National Workshop on Radiochemistry and Application of Radioisotopes

Event Report

Title of the Event: 111th DAE BRNS-IANCAS National Workshop on Radiochemistry and Application of Radioisotopes

Academic Year: 2025-26

Date: September 15th – 19th September 2025

Venue: Seminar Hall 1 (Ground Floor), The Assam Kaziranga University, Jorhat, Assam

Mode of the Event: Offline

Total number of participants: Eighty (80)

About the Workshop

The Indian Association of Nuclear Chemists and Allied Scientists (IANCAS) was founded in 1981 with an objective to popularize the beneficial aspects of nuclear energy and applications of radioisotopes in science, technology, agriculture and health care among the academic community.

IANCAS has become one of the popular platforms for popularizing the subject of nuclear and radio-chemistry across the country. IANCAS brings out quarterly thematic bulletins on the topic of relevance to the nuclear science and technology with the financial support from BRNS. The Association's popular book on "Fundamentals of Nuclear and Radiochemistry" is widely sought amongst the academia, researchers and students of DAE, non-DAE units and Universities. To achieve the excellence in popularizing the nuclear sciences through electronic media, IANCAS has its own website (www.iancas.org.in) which is updated regularly. Information about the workshops, awards and various activities of IANCAS are available on the website. All the publications of IANCAS including bulletins and books are available in free downloadable form.

This workshop, as a part of DAE-BRNS sponsored activity, will provide a forum for mutual interaction among faculty members and scientists from various educational institutions and research organizations.

Eminent scientists specialized in topics related to nuclear chemistry, nuclear physics, nuclear reactors, production and application of radioisotopes and health and safety aspects will be the resource persons of the workshop. The lectures will be supplemented by Laboratory experiments for the benefit of the participants. In addition, special session will also be held on research funding opportunities in basic and nuclear sciences for the benefit of participants associated with teaching and research.

The 111th DAE BRNS-IANCAS National Workshop on Radiochemistry and Application of Radioisotopes was held at The Assam Kaziranga University, Jorhat, Assam, from September 15 to 19, 2025. The event brought together distinguished scientists, academicians, and students to explore the wide-ranging applications of radiochemistry and nuclear science for societal benefit.

The five-day programme aimed to popularize nuclear sciences and enhance awareness about the applications of radioisotopes in diverse fields including medicine, agriculture, food, and industry. It also highlighted their potential role as sustainable alternatives to fossil fuels. Coordinated by Dr. Ashoke Chandra Deb, Senior

Scientist, BARC, the workshop featured lectures from six eminent scientists, including Dr. Y. K. Bhardwaj, Associate Director, BARC. In addition to lectures, participants received hands-on experimental training on the applications of radioisotopes in various domains.

Day One was graced by eminent scientists from BARC, the Hon'ble Vice Chancellor and Registrar of the University, along with all Deans of The Assam Kaziranga University. Faculty members of the School of Basic Sciences, students, and participants from various institutes also attended the inaugural programme, marking the beginning of a significant academic and research-oriented event.

The technical session of Day 1(one) began with a keynote address by Dr. Y. K. Bhardwaj on “Nuclear Technology for Social Prosperity.” He highlighted the role of nuclear science beyond power generation, emphasizing its contributions to healthcare, agriculture, and environmental sustainability. This was followed by Dr. (Smt.) Aishwarya S. Kar's lecture on radioactivity and nuclear decay, providing participants with a strong theoretical foundation. The day concluded with Dr. Nimai Pathak's session introducing the practical component of the workshop.

Day 2 (two) featured technical lectures on the ‘Interaction of Radiation with Matter’ by Dr. Nimai Pathak, ‘Radiation Detection and Measurements’ by Dr. Nilesh S. Tawade, and ‘Chemistry of Actinides’ by Dr. (Smt.) Aishwarya S. Kar. The sessions emphasized radiation processes, detection technologies, and the role of actinides in nuclear fuel cycles. The afternoon was dedicated to hands-on experiments with nuclear detectors, conducted in collaboration with M.Sc. students of the School of Basic Sciences.

On Day 2 (two), a few members of the expert team visited CSIR-NEIST Kendriya Vidyalaya, where they conducted hands-on experiments and interacted with school students below Class-12. This outreach initiative aimed to spark curiosity about nuclear science and radiochemistry among young learners, offering them early exposure to scientific concepts through practical demonstrations and engaging discussions.

On Day 3 (three), coinciding with Vishwakarma Puja, the technical lectures were conducted in hybrid mode. Dr. Kaushik Sanyal spoke on ‘Nuclear Structure and Stability’, Dr. Chandan Kumar on ‘Radioisotopes in Research and Development’, and Shri Uday K. Thakur on ‘Radiation Safety and Radiological Laboratories’. Later, participants rejoined on campus for hands-on sessions using nuclear detectors.

Day 4 (four) featured three insightful lectures. Dr. A. C. Deb presented on ‘Nuclear Reactors’, emphasizing design, safety, and sustainability. Dr. Kaushik Sanyal discussed the ‘Application of Radioanalytical Techniques’, and Dr. Ravindra Bansal elaborated on ‘DAE Technologies for Societal Applications’. The afternoon continued with practical training using nuclear detectors.

Day 4 (four), a few members of the expert team also visited Don Bosco School, Bungshug, Jorhat, where they conducted hands-on experiments and interactive sessions with school students below Class-12. The initiative aimed to inspire curiosity about science and provide young learners with early exposure to the fundamentals of nuclear science and its applications.

Day 5 (Five) before lunch featured two insightful lectures — “Mandate of DAE and Career Opportunities” by Dr. S. Jeyakumar and “Radioisotopes in Healthcare and Industry” by Dr. Chandan Kumar — followed by a quiz competition conducted by Dr. Nimai Pathak and his team.

Day 5 (Five) after lunch, the 111th DAE BRNS–IANCAS National Workshop on Radiochemistry and the Application of Radioisotopes concluded on September 19, 2025, with a grand valedictory session held at The Assam Kaziranga University, Jorhat. The session was graced by the Registrar of Kaziranga University, the Deans of KU, the Director of CSIR-NEIST Dr. Binoy Saikia (CSIR-NEIST and Bhatnagar Awardee), Dr. Bidyut Sarmah of Assam Agricultural University, and distinguished scientists from BARC, alongside faculty members and participants.

During the ceremony, the Department of Atomic Energy (DAE) and BARC extended significant academic contributions under their outreach scheme. Books on radioactivity and nuclear physics were distributed to various institutes across the North-East and to Kaziranga University, benefitting institutions from which

participants had registered for the workshop. This gesture aimed to strengthen academic resources in the region and to inspire further learning in nuclear sciences.

In addition, BARC handed over a Gamma Ray Spectrometer to The Assam Kaziranga University, marking a milestone in building research infrastructure. The instrument was formally transferred to the Department of Physics by the Dean of the School of Basic Sciences on September 26, 2025. This advanced facility is expected to greatly enhance academic teaching and research opportunities, enabling students and scholars to pursue experimental studies in nuclear and radiation physics.

The workshop witnessed an overwhelming response, with approximately 80 participants registering from across the region. The blend of technical lectures, hands-on training, and interactive sessions provided attendees with a comprehensive and enriching experience.

The valedictory session concluded with the distribution of participation certificates and expressions of appreciation to the organizers, speakers, and participants. The workshop successfully met its objectives of disseminating knowledge, fostering collaboration, and equipping participants with both theoretical insights and practical exposure in radiochemistry and its applications.

Dr. Ashoke Deb, the workshop coordinator, expressed his delight that the workshop was being held in North Eastern India after a long interval. A native of Shillong, Meghalaya, he completed his post-graduation at NEHU, Shillong, and earned his Ph.D. from IIT Bombay. He extended his heartfelt gratitude to the convener and local coordinator Dr. Nabajyoti Saikia, Dean of the School of Basic Sciences; co-coordinator Dr. Ratan Kumar Saha; and joint secretaries Dr. Satyabrat Gogoi, Dr. Sarfraz Ahmed, Dr. Munu Borah, and Dr. Rekha Rani Dutta for their dedicated efforts toward the noble cause of popularizing nuclear science and radioisotopes.

The five-day workshop successfully integrated theoretical insights, practical training, and interactive sessions, providing participants with a comprehensive understanding of nuclear science and radiochemistry while reinforcing their societal relevance. The program concluded with renewed enthusiasm for advancing research and applications in the nuclear domain.

Agenda for the Inaugural Session

09.30 am	Saraswathi Bandana and Lighting of Lamp
09.40 am	Welcome Address by Registrar, The Assam Kaziranga University
09.50 am	Felicitation and Introduction of the Guests
10.00 am	Address by Dr. P.K. Mishra, Vice-Chancellor, The Assam Kaziranga University
10.15 am	Address by Dr. Y.K. Bhardwaj, Associate Director, BARC
10.30 am	Address by Dr. Virendra M. Tiwari, Director, CSIR-NEIST Jorhat
10.45 am	Address by Dr. A.C. Deb, Coordinator, DAE BRNS IANCAS National Workshop (BARC)
11.00 am	Conclusion of Inaugural Session

Technical Program

Time	Lecture / Title	Proposed speaker
Sep. 15, 2025		
09:30 – 11:00	Inauguration Session	
11:00 – 11:15	Tea break	
11:15 – 12:15	L1:Keynote Speaker: Nuclear Technology For Social Prosperity	Dr. Y.K. Bhardwaj
12:15 – 13:15	L2: Introduction to Radioactivity and Decay	Dr. (Smt) Aishwarya S Kar
13:15 – 14:15	Lunch	
14:15 – 14:45	L3: Introduction to Practicals	Dr. Nimai Pathak
14:30 – 16:30	Introduction of guests with participants and formation of groups for practical.	
Sep. 16, 2025		
10:00 – 11:00	L4:Interaction of Radiation with Matters	Dr. Nimai Pathak
11:00 – 11:15	Tea break	
11:15 – 12:15	L5: Radiation Detection and Measurements	Dr. Nilesh S. Tawade
12:15 – 13:00	L6: Chemistry of actinides	Dr.(Smt) Aishwarya S Kar
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
Sep. 17, 2025		
10:00 – 11:00	L7: Nuclear Structure and Stability	Dr. Kaushik Sanyal
11:00 – 11:15	Tea break	
11:15 – 12:15	L8: Radioisotopes in Research and Development	Dr. Chandan Kumar
12:15 – 13:00	L9: Radiation Safety and Setting up a Radiological Laboratory	Shri. Uday K. Thakur
13:00 – 14:00	Lunch	

14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
Sep. 18, 2025		
10:00 – 11:00	L10: Nuclear Reactors	Dr. A.C. Deb
11:00 – 11:15	Tea break	
11:15 – 12:15	L11: Application of Radioanalytical Techniques in Research	Dr. KaushikSanyal
12:15 – 13:00	L12: DAE Technologies for societal applications	Dr. RavindraBansal
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
Sep. 19, 2025		
10:00 – 11:00	L13: Mandate of DAE and Carrier Opportunities	Dr. S. Jeyakumar
11:00 – 11:15	Tea break	
11:15 – 12:15	L14: Radioisotopes in Health care and Industry	Dr. Chandan Kumar
12:15 – 13:00	L15: Quiz competition	Dr. Nimai Pathak
13:00 – 14:00	Lunch	
14:00 – 15:30	Valedictory, Instrument Donation & Distribution of Participation Certificates.	

Experiments:

1. GM Counter (Plateau, Dead time & Statistics)

Dr. Kaushik Sanyal

Shri. Uday. K. Thakur

2. NaI(Tl) (Energy Calibration)

Dr. (Smt) Aishwarya S. Kar & Dr. Nimai Pathak

3. Radio-immuno Assay –

Dr. Chandan Kumar (& Dr. A.C. Deb for additional help if required)

4. NaI(Tl) - (Attenuation)

Shri Nilesh S Tawade (& Dr. A.C. Deb for additional help if required)

Convener / Chief Guest / Speaker / Organizer of the event

• President

Dr. P. K. Mohapatra

Ex-Dir., RC&J Group, BARC, Mumbai

• Vice-Presidents

Dr. S. C. Parida

Head, PDD, BARC, Mumbai

Dr. S. C. Tripathi

GLA University, Mathura

• General Secretary

Dr. S. K. Sharma

RCD, BARC, Mumbai

• Treasurer

Dr. Pranav Kumar

FCD, BARC, Mumbai

• Workshop Coordinator

Dr. A. C. Deb

Fuel Chemistry Division,

Radiochemistry & Isotope Group,

BARC, Mumbai-400085

Phone: 022-25596153/ 7400050592

Email: acdeb@barc.gov.in

• Advisory Committee

Dr. Sumita Sarkar, Registrar (I/c), KU

Dr. Manash Ranjan Das, CSIR-NEIST, Jorhat

Dr. Laxmi Salkia, CSIR-NEIST, Jorhat

Dr. Shyamal Kumar Kundu

Dr. Ramesh Chandra Bora

Dr. Ripunjay Gogoi

Dr. Prasanto Jyoti Goutam

Dr. Dibya Jyoti Bora

Dr. Sailendra Mahanta

Dr. Sasanka Profim Sandilya

Local Organizing Committee

• Chief Patron

Shri Basant Kumar Khetan, Pro-Chancellor,
The Assam Kziranga University

Ms. Rainy Khetan, Pro-Chancellor,
The Assam Kziranga University

• Patron

Prof. P. K. Mishra, Vice-Chancellor,
The Assam Kziranga University

• Convener

Prof. Nabajyoti Salkia, Dean
School of Basic Sciences

• Co-Convener

Prof. Ratan Kumar Saha

• Joint Secretary

Dr. Satyabrata Gogoi

Dr. Sarfraz Ahmed

Dr. Munu Borah

Dr. Rekha Rani Dutta

• Organizing Committee Members

Dr. Dimpal Jyoti Mahanta

Dr. Biju Kumar Dutta

Dr. Pankaj Bora

Dr. Rupa Rani Dey

Dr. Himashree Mahanta

Dr. Ardhendu Sekhar Khound

Dr. Manashi Kotoky

Dr. Nishant Shukla

Dr. Vishal Prajapati

Ms. Bedakhi Boruah

Mr. Dhrubajyoti Boruah

Mr. Uditpal Kamal Boruah

Mr. Anikesh Gupta

Mr. Bitupan Boruah

Ms. Rashmi Rekha Goswami

Ms. Monalisa Haliboruah

Mr. Pratyush Chatterjee

Mr. Prasanto Goutam

Mr. Parash Moni Barthakur

Mr. Debodeep Khaund

Mr. Sanjay Krishna Boruah

Mr. Trinayan Phukan

Mr. Rishav Sandilya

Mr. Dipjyoti Goswami



Attendance List of the Participants

111th DAE BRNS-IANCAS National Workshop and Outreach Program
on
Nuclear Sciences and Applications of Radioisotopes
September 15-19, 2025
Organized by

Indian Association of Nuclear Chemists & Allied Scientists (IANCAS)
Mumbai-400085
In collaboration with
Logo of The Assam Kaziranga University
School of Basic Sciences
The Assam Kaziranga University, Jorhat-785006, Assam, India

Sl No	Name	Institute Name	Designation	Contact number	Signature
1	Rini Dutta	The Assam Kaziranga University	Research Scholar	8638174749	Rini Dutta
2	Samina Afsara Hussain	The Assam Kaziranga University	Research Scholar	8638069667/ 7575910795	Samina Afsara Hussain
3	Pankaj Borah	The Assam Kaziranga University	Research Scholar	9705274659	Pankaj Borah
4	Riya Das	CSIR-NEIST, Jorhat	Research Scholar	8676186659	Riya Das
5	Achyut Sarma Hazarika	CNB College, Bokakhat	Faculty	8761960787	Achyut Sarma Hazarika
6	Debojeet Sahu	The Assam Royal Global University	Faculty	9954215185	Debojeet Sahu
7	Akashi Borthakur	The Assam Kaziranga University	Research Scholar	9706789176	Akashi Borthakur
8	Saibhik Das	Gauhati University	Research Scholar	9394103961	Saibhik Das
9	Prasunya Borah	The Assam Kaziranga University	Research Scholar	9365744031	Prasunya Borah
10	Anju Nangsu	The Assam Kaziranga University	Research Scholar	9863613859	Anju Nangsu
11	ANKUR TANTI	Dibrugarh University	Research Scholar	8472925502	ANKUR TANTI
12	Apama Deka	Dibrugarh University	Research Scholar	7837097548	Apama Deka
13	SHAYAJYOTI SARMAH	THE ASSAM KAZIRANGA UNIVERSITY	Research Scholar	8308810848	SHAYAJYOTI SARMAH

14	Rupa Newa	The Assam Kaziranga University	Research Scholar	8011620461	Rupa Newa
15	TASLIMA AKTER ROHMAN	THE ASSAM KAZIRANGA UNIVERSITY	Research Scholar	9127598616	TASLIMA AKTER ROHMAN
16	Anugraha Ania Thomas	Cochin University of Science and Technology	Research Scholar	8078715406	Anugraha Ania Thomas
17	Ankuram Dewgharia	IIT Kharagpur	Research Scholar	8512051371	Ankuram Dewgharia
18	Parthajet Kalita	The Assam Kaziranga University	Research Scholar	702638427	Parthajet Kalita
19	BIBEKANANDA GOGOI	Dibrugarh University	Research Scholar	8638608993	BIBEKANANDA GOGOI
20	Justi Merry A.B. Marak	The Assam Kaziranga University	Research Scholar	7085225638	Justi Merry A.B. Marak
21	Dibyajyoti Sarma	School of Pharmacy, The Assam Kaziranga University	Research Scholar	8402923840	Dibyajyoti Sarma
22	Binod Kumar Hazarika	Jorhat Engineering College	Research Scholar	7888927564	Binod Kumar Hazarika
23	Aishita Choudhury	The Assam Kaziranga University	Research Scholar	6000979298	Aishita Choudhury
24	Ankur Rahman	The Assam Kaziranga University	Research Scholar	7638593326	Ankur Rahman
25	Dr. Jyoti Prasad Gogoi	D.K.D. COLLEGE, DERGAON	Faculty	9884563761	Dr. Jyoti Prasad Gogoi
26	Anindita Saikia	The Assam Kaziranga University	Research Scholar	7638593326	Anindita Saikia
27	Anindita Saikia	The Assam Kaziranga University	Research Scholar	6901175143	Anindita Saikia
28	MADHUSMITA SAIKIA	The Assam Kaziranga University	Research Scholar	7673909336	MADHUSMITA SAIKIA
29	Chayanika Dutta	The Assam Kaziranga University	Research Scholar	6003043522	Chayanika Dutta
30	Md. IFTIKAR HUSSAIN	CSIR-NEIST	Research Scholar	6001376036	Md. IFTIKAR HUSSAIN
31	Rohan Bezboruah	CSIR - NEIST	Research Scholar	7896960294	Rohan Bezboruah
32	Liza Devi	The Assam Kaziranga University	Research Scholar	8761935075	Liza Devi

111th DAE BRNS-IANCAS NATIONAL WORKSHOP ON RADIOCHEMISTRY AND APPLICATION OF RADIOISOTOPES

(September 15-19, 2025)

The Assam Kaziranga University
Jorhat, Assam

List of Participants and Students for Practical Session in Physics Laboratory

Sl No	Group A	Group B	Group C	Group D
1	Rini Dutta	Samina Afsara Hussain	Pankaj Borah	Riya Das
2	Achyut Sarma Hazarika	Debojeet Sahu	Akashi Borthakur	Shayajyoti Sarma
3	Prasunya Borah	Anju Nangsu	Ankuram Dewgharia	Parthajet Kalita
4	Saibhik Das	Liza Devi	Anindita Saikia	Priya Bora
5	Bhargov Jyoti Nath	Bedanta Madhab Kalita	Md. Iftikar Hussain	Anupom Boruah
6	Rohan Bezboruah	Prasantjit Das	Hiranya Bakti	Manashi Saikia
7	Abhigyan Rajkhowa	Pallabi Bora	Floris Buragoham	Habibur Rahman
8	Nishita Kashyap	Blagyasri Gogoi	Phalguni Boruah	Neha Bora
9	Kasturika Dutta	Kobita Chetry	Madhurya Gogoi	Manaswinee Borkotoky
10	Abhinav Handique	Ishani Dutta	Bikram Khound	Bibhashan Dutta
11	Ebtaza Sheikh	Toushiya Afroz Gazi	Bidipta Phukon	Bhagya Jyoti Dutta
12	Maria Farhin	Muskum Khanna	Shivani Bhattacharyya	Ronit Biswal Kashyap

**111th DAE BRNS- IANCAS NATIONAL WORKSHOP ON RADIOCHEMISTRY
AND APPLICATION OF RADIOISOTOPES**
(September 15-19, 2025)
The Assam Kaziranga University
Jorhat, Assam

List of Participants and Students for Practical Session in Physics Laboratory

Sl No	Group A	Group B	Group C	Group D
1	Rani Datta	Saima Afsana Hussain	Pankaj Borah	Riya Das
2	Achyut Sarma Hazarika	Debojeet Saha	Akashi Borahkar	Shaygyoti Sarmah s
3	Prasurya Borah	Anjo Nungma	Askuram Dewgharia	Parthajeet Kalita
4	Saibhik Das	Eiza Devi	Anindita Saikia	Priya Bora
5	Bhagpov Jyoti Nath	Bodanta Madhab Kalita	Md. Ifikar Hussain	Anupom Boruah
6	Roham Borboruah	Prasantjit Das	Hiranya Bakta	Manashi Saikia
7	Abhagyan Rajkhowa	Fallabi Bora	Florina Buragoham	Habibur Rahman
8	Nishita Kashyap	Bhagyasri Gogoi	Phalguni Boruah	Neha Bora
9	Kastorika Datta	Kobita Chetry	Madhureya Gogoi	Manaswinee Borkotoky
10	Abhinibesh Handique	Ishani Datta	Bikrant Khound	Bibhashan Datta
11	Elnaza Sheikh	Toushiya Afrooz Gazi	Bodipta Phakon	Bhagya Jyoti Datta
12	Maria Farhin	Muskm Khatun	Shivani Bhattacharyya	Ronit Biswal Kashyap

Sample copy of certificate presented to the participants



Feedback from the participants

The feedback collected through Google Forms reflected overwhelmingly positive responses from the participants. The workshop was widely recognized as highly successful in achieving its academic and professional objectives. Students particularly appreciated the hands-on experiments and practical demonstrations, noting that these activities offered valuable exposure and strengthened their conceptual understanding. The interactive sessions with experts were described as engaging and informative, fostering a dynamic learning environment that encouraged open dialogue and conceptual clarity. Participants also commended the professional and inclusive atmosphere of the workshop, which made the learning experience both collaborative and enriching.

A strong recommendation emerged to organize similar programs in the future, with participants emphasizing the importance of extending the duration and depth of the practical sessions. Many also suggested incorporating more advanced content and structured group discussions with resource persons to facilitate deeper learning and critical engagement. Overall, the feedback highlighted the workshop's success in balancing theory with practice while inspiring participants to pursue further exploration in the field of radiochemistry and nuclear applications.

Photographs of the event



Copy of the Flyers/Brochures/Pamphlet



N Saikia

(Dr. Nabajyoti Saikia)

Dean, School of Basic Sciences

Convener and Local Coordinator