

REPORT

**102nd BRNS-IANCAS National Workshop on
“Radiochemistry and Applications of Radioisotopes”
held at GITAM School of Science, GITAM (Deemed to be) University,
Hyderabad, during April 04-08, 2022**

The 102nd BRNS-IANCAS National Workshop on “Radiochemistry and Applications of Radioisotopes” was jointly organized by IANCAS & **GITAM School of Science, GITAM University, Hyderabad, during April 04-08, 2022**. Dr. Seraj Ansari, Radiochemistry Division & Secretary, IANCAS was the coordinator for this Workshop. Prof. G.A. Rama Rao, Principal, GITAM School of Science, GITAM University was the Local Convener. The Workshop was attended by about 70 participants from various departments of GITAM University and other nearby Colleges. Each participant was given a Workshop Participation Certificate and a set of three IANCAS books (i) Fundamentals of Radiochemistry and (ii) Nuclear Materials (English) (iii) Nuclear Materials (Telgu language).



Inaugural function of the Workshop was attended by Prof. N. Siva Prasad, Pro-vice Chancellor, GITAM Hyderabad Campus, Dr. Verma, Resident Director, GITAM University, Dr. S. Kannan, Vice-President, IANCAS, Dr. S.A. Ansari, Secretary, IANCAS and Prof. G.A. Rama Rao, Local Convener of the Workshop. Prof. Rama Rao welcomed the audience and briefed about the Workshop. Dr. S. Kannan briefed the audience about the various activities of IANCAS. Later, he delivered a keynote lecture on the topic “DAE at a Glance”. Dr. S.A. Ansari briefed about the theme of the Workshop and emphasized that the Workshop would provide an excellent platform for interaction with eminent scientists and would provide hands-on training with nuclear detectors. Dr. Verma in his address briefed about the various facilities of the GITAM University. Pro-Vice Chancellor in his brief address urged the participants for their active participation in the Workshop, and urged them to gain the experience and knowledge of radiochemistry and radioisotope by the resource persons of this Workshop. Dr. N.K. Katari, GITAM University proposed the vote of thanks at the end of the inaugural function.

The technical program of the Workshop (enclosed) comprised of 12 Lectures, covering the fundamentals of nuclear and radiochemistry, interaction of radiation with matters, radiation detection and measurements, radioanalytical techniques, actinide chemistry, nuclear reactors, production and application of radioisotopes in healthcare, agriculture, hydrology, polymer sciences and industry. These lectures were delivered by 6 resource persons, and 3 guest speakers. A special lecture was also delivered virtually by Shri M.K. Sapra, Scientific Secretary, BRNS on UGC-DAE collaborative programmes. All the lectures were held during the morning sessions, whereas the experiments were conducted in the afternoon sessions. After the last lecture of each day, quiz competitions were organized, which were eagerly participated and appreciated by the participants. Each day about 15 quiz questions were asked, and the winners were awarded with a gift (Pen). Six participants, who gave the maximum correct answers in all five days quiz, were awarded with mega prize in the valedictory function. Afternoon experiments included: (1) GM Counter, (2) Gamma-ray Spectrometry using NaI(Tl) detector, (3) U/Th separation by solvent extraction, and (4) Radioimmunoassay.

Valedictory function was held on April 08, 2022 at 02:30pm. Mr. M. Sri Bharat, President, GITAM Society was the Chief Guest, and Dr. Y.K. Bhardwaj, Head, RTDD, BARC was the Guest of Honor. All the participants were given participation certificates by the chief guest. On behalf of IANCAS, Dr. Y.K. Bhardwaj donated one NaI(Tl) scintillation gamma ray spectrometer and one GM Counter to the GITAM University. Prof. Prof. N. Siva Prasad, Pro-vice Chancellor, GITAM Hyderabad Campus, in his valedictory address, declared the Workshop a grand success. He mentioned that through this Workshop the participants could acquired the knowledge of Nuclear Sciences and Technology and their utilization for mankind. Mr. M. Sri Bharat in his remarks urged the participants and faculties of the GITAM to utilize the experience and knowledge gained in the Workshop in their teaching and research. Finally, Dr. T. Vishwam, GITAM University proposed the vote of thanks, and declared the end of the five days National Workshop.

Each day of the Workshop, including the inaugural and valedictory function, was well covered by the electronic media and various local news papers (Telugu news papers) and English news papers.

S.A. Ansari
Workshop Coordinator
April 15, 2022

Technical Program

Time	Lecture / Title	Speaker
April 04, 2022 - Monday		
10:00 – 10:30	Inauguration Session	
10:30 – 11:00	Tea break	
11:00 – 12:00	Keynote Speaker: DAE at a Glance	Dr. S. Kannan
12:00 – 13:00	L1: Introduction to Radioactivity, Nuclear Decay and Nuclear Reactions	Dr. A.V.R. Reddy
13:00 – 14:00	Lunch	
14:00 – 14:30	L2: Introduction to Practicals	S.A. Ansari
14:30 – 16:00	Introduction of guests with participants and formation of groups for practicals. Setting up of laboratory for practical.	
April 05, 2022 - Tuesday		
10:00 – 11:00	L3: Nuclear Structure, Nuclear Stability	Dr. A.V.R. Reddy
11:00 – 11:15	Tea break	
11:15 – 12:00	L4: Interaction of Radiation with Maters	Dr. D. Dutta
12:00 – 13:00	L5: Production of Radioisotopes	Dr. Madhav Mallia
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
April 06, 2022 - Wednesday		
10:00 – 11:00	L6: Radiation Detection and Measurements	Dr. D. Dutta
11:00 – 11:15	Tea break	
11:15 – 12:00	L7: Application of Radioanalytical Techniques in Research	Dr. Ramanjaneyulu
12:00 – 13:00	L8: Radioisotopes in Health Care and Industry	Dr. Madhav Mallia
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
April 07, 2022 - Thursday		
10:00 – 11:00	Isotopes in Agriculture and Food Industry (Online)	Dr. S. Gautam
11:00 – 11:15	Tea break	
11:15 – 12:00	L9: Isotope in Hydrology & Environmental Studies	Dr. Tirumalesh
12:00 – 13:00	L10: Chemistry of Actinides and Nuclear Reactors	S.A. Ansari
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
April 08, 2022 - Friday		
10:00 – 11:00	L11: Radiation Technology in Polymer Sciences	Dr. Y.K. Bhardwaj
11:00 – 11:15	Tea break	
11:15 – 12:15	L12: Radiation Safety and Setting up a Radiological Laboratory	Dr. Rama Rao
12:15 – 13:00	L13: BRNS and UGC-DAE Collaborations (Online)	Shri M.K. Sapra
13:00 – 14:00	Lunch	
14:00 – 15:30	Valedictory function, Instrument Donation & Distribution of Participation Certificates and prizes.	

Experiments:

1. GM Counter – by Dr. Dhanadeep Dutta (Plateau, Dead time & Statistics)
2. NaI(Tl) – by Shri Chandrasekhar (Calibration, Dead time & Statistics)
3. Radio-immuno Assay – by Dr. Madhava Mallia
4. Separation of Uranium and Thorium – by Dr. S.A. Ansari

Resource persons

1. Dr. S.A. Ansari, RCD
2. Dr. A.V.R. Reddy, Ex-Head, ACD
3. Dr. Dhanadeep Dutta, RCD
4. Dr. Madhav Mallia, RPhD
5. Dr. P.S. Ramanjaneyulu, RACD
5. Shri D. Chandra Shekhar, PDD

Guest speakers

1. Dr. Y.K. Bhardwaj, Head, RTDD
2. Dr. Tirumalesh Keesari, IRAD
3. Dr. S. Gautam, Head, FTD (Online)
4. Shri M.K. Sapra, BRNS (Online)

Glimpses of Workshop



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