

16th Biennial DAE-BRNS Symposium on Nuclear and Radiochemistry **NUCAR - 2023**

May 01-05, 2023

*DAE Convention Centre, Anushaktinagar,
Mumbai, India*



NUCAR - 2023

Sponsored by

Board of Research in Nuclear Sciences (BRNS)

Organized by

Bhabha Atomic Research Centre (BARC), Mumbai

In association with

Indian Association of Nuclear Chemists & Allied
Scientists (IANCAS)

Website: : <https://www.iancas.org.in/nucar2023>

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ABOUT NUCAR-2023

The DAE-BRNS 16th Biennial Symposium on “Nuclear and Radiochemistry (NUCAR-2023)” is being organized by Bhabha Atomic Research Centre (BARC) in association with Indian Association of Nuclear Chemists and Allied Scientists (IANCAS) at the DAE Convention Centre, Anushaktinagar, Mumbai during 01-05, May, 2023. This symposium is sponsored by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE). This symposium will be one of the largest meetings exclusively dedicated to Radiochemistry and Allied Sciences. The main objective of NUCAR symposium is to provide a forum for scientists and researchers to discuss the recent advances and breakthroughs in various topics like nuclear reactions & probes, chemistry & spectroscopy of actinides, reactor materials and fission products, chemistry of nuclear fuel cycle, radioanalytical chemistry, application of radioisotopes & radiation technology in healthcare, agriculture and industries, environmental radioactivity, nuclear instrumentation, nuclear safeguards & forensics etc. NUCAR symposium is very familiar to all scientific communities of DAE, national laboratories and various academic institutions of India. The conference will be extremely useful for young researchers in the sense that it will be attended by eminent scientists from National Laboratories, Universities and Research Institutes from India and abroad and this will facilitate the young minds for effective interaction with the scientists engaged in research in the areas of nuclear & radiochemistry and allied sciences. BARC, in association with IANCAS has organized NUCAR symposium throughout the length and breadth of the country in the past to popularize the subject of Nuclear and Radiochemistry among research institutes and to highlight the peaceful use of Atomic Energy. The previous venues and years of NUCAR Symposium are mentioned below.

2022-DAE Convention Centre, BARC, Mumbai

2019-DAE Convention Centre, BARC, Mumbai

2017- KIIT University, Bhubaneswar, Odisha

2015-Nabhikiya UrjaBhavan (NPCIL), Anushakti Nagar, BARC, Mumbai

2013-Govt. Model Science College, Rani Durgavati University, Jabalpur, MP

2011-GITAM University, Visakhapatnam, Andhra Pradesh

2009-Mithibai College, University of Mumbai, Mumbai

2007-M.S.University of Baroda, Vadodara, Gujarat

2005-Guru Nanak Dev University, Amritsar, Punjab

2003-BARC, Anushakti Nagar, Mumbai

2001-Savitribai Phule Pune University, Pune, Maharashtra

1999-BARC, Anushakti Nagar, Mumbai

1997-Saha Institute of Nuclear Physics, Kolkata

1995-Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, Tamil Nadu

1993-Andhra University, Visakhapatnam, Andhra Pradesh



SCOPE

- A. Nuclear chemistry and nuclear probes
- B. Chemistry of reactor materials
- C. Chemistry & spectroscopy of actinides
- D. Chemistry of fission and activation products
- E. Nuclear and radioanalytical techniques
- F. Applications of radiopharmaceuticals and radioisotopes
- G. Environmental radiochemistry
- H. Nuclear safeguards & nuclear forensics
- I. Nuclear instrumentation

The five day symposium will bring together a panel of highly accomplished experts in the field of Nuclear & Radiochemistry and Allied Sciences. The scientific programme of the symposium includes key note address, plenary talks, invited talks, thematic lectures and invited short lectures by eminent scientists from India and overseas. The invited talks will encompass both basic studies and applications addressing the topics of both front end and back end of nuclear fuel cycle in addition to the topics as per the scope of the symposium. Contributed papers will be presented in both Oral and Poster sessions. It is proposed to have oral presentation by the young researchers based on the novelty of their work as recommended by the reviewers. The oral presentations as well as poster presentations will be reviewed by a panel of judges for the best presentation awards. Invited talks and contributory abstracts will be published as a *Book of Abstracts* and soft copy of the book will be distributed to the delegates during the symposium.

Abstracts of the contributed papers will be peer reviewed prior to their acceptance in the symposium proceedings. Limited number of papers will be selected (as per recommendation of reviewers) for publication as special issue in the reputed journal, "Radiochimica Acta". The authors will be intimated in advance about the selection of their contributions for journal publication. Authors have to prepare manuscript as per the format provided at <http://apsorc2009.berkeley.edu/assets/docs/Radiochimica-Acta-Instructions-to-Contributors.pdf> and send to nucar2023@barc.gov.in along with plagiarism evaluation report of the manuscript.

Half Day Seminar:- To commemorate platinum jubilee year of Atomic Energy commission of India (1948-2023), half a day of the symposium will be dedicated to "Role of Sciences in the Progress of Atomic Energy in India" as a theme.

Board of Research in Nuclear Sciences (BRNS)

The Department of Atomic Energy (DAE) through its nodal funding agency–The Board of Research in Nuclear sciences (BRNS) supports extramural research and development activities in nuclear and allied sciences, engineering and technology. The major activities of BRNS are: identifying and funding R&D programmes and projects, award fellowship to pursue doctoral programmes and research grants to young scientists. It also organizes symposia on the topic of relevance and interest to DAE as well as other frontier areas of science and technology, extend financial support to symposia and conferences organized by professional bodies and other agencies, establishment of chairs in universities and other institutions of higher learning, create infrastructure facilities for advance research, identify/create and support centres of excellence. For more information, please visit the website (www.brns.res.in).

AUTHORS PLEASE NOTE

- ✦ A one page abstract needs to be submitted and abstracts based on original unpublished work will only be accepted for presentation.
- ✦ Contributory abstracts are invited on topics listed under scope of symposium heading. The template can be downloaded from <http://www.iancas.org.in/nucar2023>.
- ✦ Abstracts not complying with the scope or format will not be accepted.
- ✦ Abstracts should be categorized (A to I) as per the titles given under SCOPE of the symposium. However, depending on the reviewer's comments, the same might be changed.
- ✦ All participants of NUCAR-2023 are requested to register themselves in advance by filling the registration form online at www.iancas.org.in/nucar2023. All the participants need to create a 'user account' at this web site to submit the one page abstract. E-mail ID of all the authors should be provided at the time of submission of abstract. Presenting author's name (in the *list of authors* of abstract) should be underlined. The template for the abstracts will be available on the website.
- ✦ Abstracts both in word file format as well as pdf file format have to be uploaded in the website.

IMPORTANT DATES

LAST DATE FOR

Online registration	April 01, 2023
Submission of one page Abstract	March 1, 2023
Intimation of Acceptance	March 15, 2023
Payment of Registration Fee	April 01, 2023
Request for Accommodation	April 15, 2023
Full Paper Submission for RadiochimicaActa	April 15, 2023

REGISTRATION FEE

PhD Students and Research Fellows	INR 2000
Delegates from Government & Academic Institutes	INR 4000
Accompanying Person (Indian)	INR 1000
Delegates from Public Sector Undertakings/ Private Industries	INR 6000
Delegates from Overseas/Abroad	USD 150
Accompanying Person from Overseas/Abroad	USD 100

The user account created for paper submission could be used for Registration fee payment and request for accommodation. Foreign nationals should fill the Annexure I (excel sheets) provided in the website.

BANK DETAILS

A/C Name:	NUCAR-2023
A/C No.:	41538223329
Bank Name:	State Bank of India
Branch:	BARC Branch Trombay
IFSC Code:	SBIN0001268
SWIFT Code:	SBININBB508
MICR Code:	400002006
Mode of payment:	NEFT/RTGS

Transaction copy of receipt with name(s) should be sent to: nucar2023@barc.gov.in or nucar2023@gmail.com.

Registration fee can also be paid through Demand Draft (DD) drawn in favor of "NUCAR-2023" payable at Mumbai (SBI, BARC Branch, Trombay, IFSC: SBIN 0001268) by April 01, 2023. Spot registration by Cash may kindly be avoided. Registration Fee Receipts will be provided to the participant during Symposium period. The registration fee covers electronic copy of symposium proceedings (CD), lunch and refreshments during the symposium period, but does not cover the accommodation charges.

ACCOMMODATION

Limited accommodation for delegates will be available at BARC Guest Houses/Hostels, on payment basis. Delegates interested to stay at Private Hotels can do so directly with the hotel and inform us accordingly. Request for accommodation should be made at symposium website only after payment of registration fee.

TRAVEL ARRANGEMENTS

Participants are requested to make their own travel arrangements. Financial assistance by Third A/C train fare for shortest route of travel may be available to a limited number of research scholars or students for whom their establishment is unable to arrange. Financial assistance will be provided for only presenting authors of NUCAR-2023 symposium. Requests for financial assistance must be forwarded through the Director/Head of the parent institute to the Secretary, NUCAR-2023, positively by April 30, 2023. On the spot requests for travel assistance will not be entertained.

ABOUT VENUE

D.A.E. Convention Centre, Anushaktinagar, Mumbai:

DAE-Convention Centre is located in Anushaktinagar, the residential colony of Bhabha Atomic Research Centre (BARC) and other DAE units located in Mumbai. BARC is the premier multidisciplinary Nuclear Research Centre of India. Anushaktinagar is located at the north-eastern part of Mumbai city, which is well connected to other parts of India and to the rest of the world. Participants arriving by train may alight at Dadar, Mumbai Central, Mumbai CST, Kurla or Bandra Terminus. Those travelling by air will arrive at Chhatrapati Shivaji Maharaj International Airport (CSMIA). Anushaktinagar is about 22 km from Mumbai CST, less than 20 km from the other terminals, and about 20 km from the international airport (CSMIA). Black-Yellow-metered taxis are available at airports and railway stations along with mobile app based rental cars. Delegates coming by flights are advised to take taxi from pre-paid taxi service or mobile app based rental cars at the airport. Taxi fares are based on tariff related to the meter readings. Anushaktinagar is also approachable by the harbour branch of local trains that start from Mumbai CST and pass through Mankhurd station. Those travelling by local trains should alight at Mankhurd station and take auto-rickshaw from there for reaching the BARC Guest House located at Anushaktinagar. GPS QR codes and map of Mumbai given below may be used for reaching destinations.

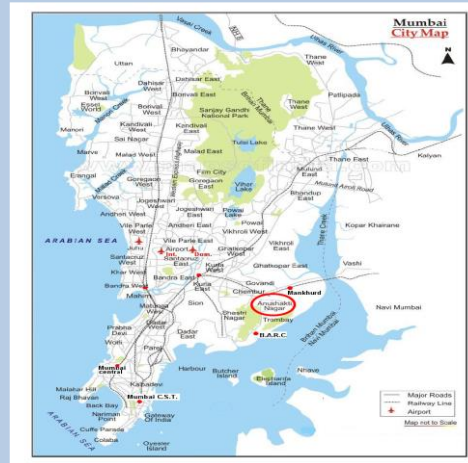
GPS QR code for Training School Hostel.



GPS QR code for D.A.E. Convention Centre.



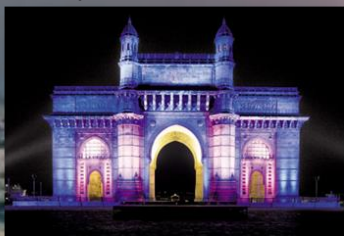
MAP OF MUMBAI :



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ABOUT MUMBAI:

Mumbai (earlier Bombay) on the west coast of India is the entertainment and financial capital of India. It is one of the most populous and biggest cities of Maharashtra state. There are several attractions that Mumbai offers like a walk around the streets of Colaba or near Churchgate, night-view at the Chhatrapati Shivaji Maharaj Terminus, Taj Hotel, Gateway of India, tour of Filmcity. From modern engineering masterpieces like Sea Link, to the ancient sculptures of Elephanta caves, Mumbai offers a unique assortment of experiences. There are several research organizations in Mumbai including Bhabha Atomic Research Centre (BARC), Tata Institute of fundamental research (TIFR), Indian Institute of Technology (IIT), Bombay and Institute of Chemical Technology (ICT).



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