

NUCAR - 2017

DAE-BRNS

13th National Symposium on

Nuclear and Radiochemistry

at

KIIT University, Bhubaneswar

February 6-10, 2017

Organized by

Bhabha Atomic Research Centre

in association with

Kalinga Institute of Industrial Technology,

KIIT University, Bhubaneswar-751024

Odisha, India

&

Indian Association of Nuclear Chemists and Allied Scientists

(IANCAS)

Sponsored By

Board of Research in Nuclear Sciences,

Department of Atomic Energy



न्यूकार – २०१७

**नाभिकीय एवं
रेडियोरसायनिकी
संगोष्ठी**

स्थान

केआयआयटी विश्वविद्यालय, भुवनेश्वर

फरवरी ६-१०, २०१७

आयोजक

भाभा परमाणु अणुसंधान केंद्र

सहआयोजक

**औद्योगिक प्रौद्योगिकी के कलिंग इंस्टीट्यूट
केआयआयटी विश्वविद्यालय, भुवनेश्वर – ७५१०२४
ओडिशा, इंडिया.**

एवं

**इंडियन एसोशिएशन ऑफ न्यूक्लीयर केमिस्टस् एन्ड
एलाइड साइन्टिस्टस् (ईयान्कास)**

प्रायोजक

नाभिकीय विज्ञान अनुसंधान बोर्ड

(बी.आर.एन.एस.)

परमाणु ऊर्जा विभाग

About NUCAR

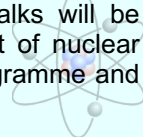
The 13th DAE-BRNS biennial symposium on “Nuclear and Radiochemistry” (NUCAR) is being organized by Bhabha Atomic Research Centre in association with KIIT University, Bhubaneswar, Odisha and Indian Association of Nuclear Chemists and Allied Scientists (IANCAS), Mumbai during February 06-10, 2017. This symposium is sponsored by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE). It is one of the oldest and prestigious symposia of DAE that has been held throughout the length and breadth of the country to popularize Nuclear and Radiochemistry among universities and research institutes. This symposium will be exclusively dedicated to nuclear chemistry and nuclear probes, chemistry of actinides, fusion and fission reactor materials and applications of radioisotopes in industries and medicine. It will be attended by scientists from National Laboratories, Universities and Research Institutes from India and abroad and will provide a platform for effective interaction among the scientists involved in research in the frontier areas of Nuclear and Radiochemistry and applications of radioisotopes.

Scope

- A - Nuclear Chemistry and Nuclear Probes**
- B - Chemistry of Fusion and Fission Reactor Materials**
- C - Chemistry and Spectroscopy of Actinides**
- D - Chemistry of Fission and Activation Products**
- E - Radioanalytical Chemistry**
- F - Application of Radioisotopes**
- G - Environmental Radioactivity**
- H - Nuclear Instrumentation**

The symposium will feature invited lectures, short presentations by young scientists apart from oral and poster presentations. The best oral and poster presentations will be awarded by IANCAS. The 5 day event shall witness the deliberations on emerging areas of research being pursued by renowned researchers. Abstracts of contributed papers will be peer reviewed prior to inclusion in the symposium proceedings from which limited number of papers will be selected for publication in the Journal of Radioanalytical and Nuclear Chemistry (JRNC). The volume of Symposium proceedings containing invited talks and contributory papers will be distributed to the delegates during the symposium.

Half Day Seminar: A half day seminar will be organized during the symposium to commemorate the platinum jubilee year of the criticality of the first man made nuclear reactor, Chicago Pile-1. Special talks will be presented during the seminar to highlight the advancement of nuclear reactor technology, highlights of Indian Nuclear Reactor Programme and societal benefits of the nuclear reactors.



The Venue

KIIT University, formerly Kalinga Institute of Industrial Technology was founded by the noted social and educational entrepreneur Dr. Achyuta Samanta in 1992. It was conferred the status of University in 2004 and it became the youngest member of Association of Commonwealth Universities and entered into the Limca Book of Records. All the academic programmes are accredited by NAAC of UGC and NBA of AICTE, which are benchmarks of excellence. NAAC and UGC have awarded KIIT the highest grade of "A".



The University spreads over 25 km² area accommodating 22 world class campuses with 1 million m² of aesthetically constructed built up area accommodating 1800 faculty, scientists and researchers and over 25,000 full-time students in more than 100 academic programmes. The University has collaborations with several research organizations like Department of Science and Technology (DST), Department of Atomic Energy (DAE) and Council of Scientific and Industrial Research (CSIR). The University is a member of various prestigious world bodies like the International Association of Universities (IAU), European Association of International Education (EAIE), United Nations Academic Impact (UNAI) & Eurasian Silk Roads Universities Consortium (ESRUC) of Turkey etc.

Aesthetic campuses of KIIT University are perched in the historic city of Bhubaneswar, the capital city of the east coastal state of Odisha, which uniquely blends modernity with tradition. Bhubaneswar is also popularly known as the "Temple City of India" and is an important Hindu pilgrimage centre. Hundreds of temples dot the landscape of the old Bhubaneswar. The new Bhubaneswar with its modern buildings and extensive infrastructure perfectly complements its historic surroundings consisting of Khandagiri and Udaygiri Caves, Lingaraj and Rajarani Temples, Dhuli Shanti Stupa and Budhhist Monument, Sun Temple and Jagannath Temple to name a few. The city is famous for Nandankanan, a Biological Park hosting the maximum numbers of white tigers in the Country and also for huge collection of Cacti in Ekamra Kanan. Overall, the city of Bhubaneswar is an ideal tourist destination for all.

The Khandagiri and Udaygiri Caves

These Caves are of archaeological, historical and religious importance and contain varieties of rock-cut caves, built mainly for the Jain monks during the reign of King Kharavela around 1st - 2nd century B.C. Udayagiri means



"Sunrise Hill" and has 18 caves while Khandagiri has 15 caves. The most important of this group is Ranigumpha in Udayagiri which is a double storied monastery. The thirteen years lithic record of King Kharavela engraved in Hati Gumpha (Elephant Cave) is a magnificent specimen of Pali records found in India.

The Lingaraj Temple



This elegant 11th Century A.D. and 180 ft. gigantic edifice in Bhubaneswar is an eloquent monument where every flange of stone is ornate with floral and geometric decoration. It is one of the oldest temples and the most prominent landmark of the Bhubaneswar city and major tourist attractions of the state.

Dhaulti Shanti Stupa

Dhaulti hills are located on the banks of the river Daya. Dhaulti hill brings back memories of the historic 'Kalinga war' which was fought around here. Ashoka had a special weakness for Dhaulti, where the battle was fought. The Daya river was said to have turned red with the blood of the many deceased after the battle, and enabled Ashoka to realize the magnitude of horror associated with war and it was here that Ashoka, the terrible, was transformed into Ashoka, the compassionate. He saw to it that Dhaulti became an important centre of Buddhist activities and built several chaityas, stupas and pillars here. Dhaulti has gained prominence due to the establishment of a Buddhist Peace Pagoda, popularly known as Shanti Stupa, built in the early seventies by the Japan Buddha Sangha and Kalinga Nippon Buddha Sangha. An old temple of Lord Dhavaleswar, reconstructed in 1972, also stands on the hill-top.



Konark Sun Temple

It is a 13th-century Sun Temple at Konark in Odisha. It is believed that the temple was built by king Narasimhadeva-I of Eastern Ganga Dynasty in 1255 AD. The temple complex is in the shape of a gigantic chariot, having elaborately carved stone wheels, pillars and walls. A major part of the structure is now in ruins. The temple has been built in

the form of a giant ornamented chariot of the Sun god, Surya. It has twelve pairs of elaborately carved stone wheels which are 3 meters wide and is pulled by a set of seven horses. The temple follows the traditional style of Kalinga architecture. It is carefully oriented towards the east so that the first rays of sunrise strike the principal entrance. The original temple was supposedly 229 feet tall which might have collapsed due to removal of the

strong magnetized rod by Portuguese shipmen which was at the centre and keeping the temple structure erect. The structure which is still present is the audience hall (Jagamohana) about 128 feet (30 m) tall. The temple is a UNESCO World Heritage Site and has also featured on various lists of Seven Wonders of India. The temple is 65 km from Bhubaneswar.

Lord Jagannath Temple

The magnificent 192 feet high 12th Century temple at Puri is one of the four sacred cities (Dham) in India for Hindus which enshrines the deities of Lord Jagannath, Balabhadra and Subhadara. The temple observes rituals around the year and the unique Rathayatra associated with the deities attract millions of people. The temple is 60 km from Bhubaneswar.



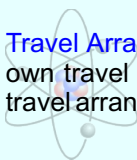
The city of Bhubaneswar has excellent communication with the outside world. The city is conveniently linked to all major cities in India by Air, Rail and Road. The Biju Patnaik International Airport in Bhubaneswar has regular flights to and from all the major cities of India and to the state

capitals. Bhubaneswar serves as the head quarters of East Coast Railway Zone of the Indian Railways and has excellent connectivity with all the major Indian cities by direct superfast/express trains. The City Municipality operated A/C Buses or privately operated Taxis are the best mode of transport within the city for sightseeing. The map of the city is given in website www.nucar.org. The climate of Bhubaneswar during the month of February will mostly be pleasant. The average day and night temperatures are 30 °C and 18 °C, respectively.

BRNS

Board of Research in Nuclear Sciences (BRNS) is the nodal funding agency of The Department of Atomic Energy (DAE) that supports extramural research and developmental activities in nuclear and allied sciences, engineering and technology. The major activities of BRNS are identifying and funding R&D programmes and projects, awarding fellowships and research grants to young scientists, organize symposia on topic of relevance and interest to DAE as well as in frontier areas of science and technology. Also, BRNS supports symposia organized by professional bodies and other agencies, helps to establish chairs in universities and other institutions of higher learning, and creates infrastructure facilities for advanced research. For further information, one may visit the BRNS website www.daebrns.gov.in.

Travel Arrangements: It is expected that the participants will make their own travel arrangements to the city of Bhubaneswar. However, the local travel arrangements to the venue will be provided by the organizers.



Financial Assistance

TA/DA may be made available to a few deserving participants where sponsoring institution is unable to arrange the same. Forms for request for financial assistance are available on the symposium website (www.nucar.org) which can be filled up online along with the submission of paper.

Authors Please Note

1. Papers based on original unpublished work will only be accepted.
2. Contributory papers on listed topics, under the scope of the Symposium, should be of two pages (template given in the website www.nucar.org). However, papers for invited talks can be up to four pages.
3. Manuscript should be categorized (A to H) as per the titles given under 'Scope' of the symposium

Procedure of paper submission

All contributing authors must register first on the symposium website www.nucar.org. After registration, authors may download the template of the manuscript and incorporate text of their papers to it. The general guidelines of writing scientific paper with respect to originality and plagiarism should be followed by authors. It is mandatory to provide e-mail addresses of all co-authors and a covering letter during paper submission. Papers not as per the template will be rejected by the electronic system. All papers must be uploaded on the symposium website www.nucar.org within the specified time frame given in the website. No other mode of paper submission is acceptable. The 'Scope' (A to H) chosen by the authors for their papers might be changed in the final symposium volume depending on the referee's comments.

Last Date for

Submission of Contributory Papers	: August 16, 2016
Submission of Invited Papers	: September 30, 2016
Intimation of acceptance of Papers	: October 1, 2016
Request for Accommodation	: November 1, 2016
Submission of Registration Fee	: December 15, 2016

After the due date, the online submission gateway will be closed and further paper submission will not be possible.

All correspondence regarding NUCAR-2017 may be addressed to the Secretary, NUCAR-2017.

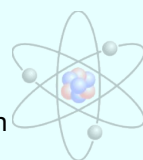
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Registration

Registration is a must for all the participants. The registration form can be filled up online on the symposium website at www.nucar.org. The following fee structure is applicable for NUCAR-2017.

Students and Research Fellow	INR 1000/-
Delegates from Universities/Educational Institutes/Government Departments	INR 2500/-
Accompanying Person (Indian)	INR 1500/-
Delegates from Public Sector Undertakings	INR 3500/-
Delegates from Overseas Developing Countries	\$ 200/-
Delegates from Other Countries	\$ 500/-
Accompanying Person (Foreign National)	\$ 200/-

Registration fee is to be paid in the form of a Demand Draft drawn in favor of "NUCAR2017" payable at Mumbai. The payment can also be made online through RTGS/NEFT to the NUCAR2017 account directly as per details given below.

Account Name- : **NUCAR2017**
Account Number- : **35753361121**
Bank Name- : **State Bank of India**
Branch Address- : **BARC, Trombay, Mumbai-400085**
IFSC Code- : **SBIN0001268**

A copy of the Demand Draft/printout of the acknowledgement of RTGS/NEFT along with a print out of the online filled registration form should be sent (via e mail or hard copy) to Secretary, NUCAR-2017 within the specified time frame.

Accommodation

The accommodation request form can be filled up online on the symposium website www.nucar.org. The accommodation request will be accepted till 1st November, 2016. The city of Bhubaneswar has all kinds of tariff hotels stating from INR 2500/ to 7500/. Accommodation of the participants is going to be arranged at concessional rate on single and twin sharing basis. A list of preferred hotels with their special concessional rate chart for NUCAR participants will be displayed on the symposium website in due course. Efforts will be made to provide subsidized accommodations for students/research scholars in hostels of KIIT University. Accommodations of special invitees would be arranged in KIIT University Guest house. All correspondence regarding the accommodation should be addressed to the following addressee and a copy of accommodation request form should also be sent to the Secretary, NUCAR-2017 (nucar2017@barc.gov.in).

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