#### MAIN TOPICS TO BE COVERED

- ✓ Fundamentals of radioactivity
- ✓ Application of radioisotopes
- ✓ Nuclear fuel cycle
- ✓ Nuclear reactors
- ✓ Nuclear reactor safety

## **PROGRAMME SCHEDULE:**

#### DAY 1 (10 - 02 - 20165)

09.00A.M to 09.30A.M 09.30A.M to 10.30A.M 10.30A.M to 10.45A.M 10.45A.M to 11.45A.M 11.45A.M to 12.45 P.M 12.45P.M to 01.30 P.M 01.30 P.M to 04.00 P.M

## DAY 2 ( 11 - 02 - 2016)

09.00 A.M to 09.50 A.M 09. 50 A.M to 10.40 A.M 10.40 A.M to 11.00 A.M 11.00 A.M to 11.50 A.M 11.50 A.M to12.40 P.M 12.40 P.M to 01.30 P.M 01.30P.M to 02.30 P.M 02.30P.M to 03.30 P.M

### **RESOURCE PERSONS:**

Sri **C.R.Venkata subramani** President, IANCAS (SRC) Sri **K.A.Venkatesan** Scientific Officer/G, IGCAR, Kalpakkam Sri **G.V.S.Ashok Kumar** Scientific Officer/D, IGCAR, Kalpakkam Sri **R. Kumar** Scientific Officer/G, IGCAR, Kalpakkam

## ORGANIZING COMMITTEE

Chief Patrons: Sri V.Thapovardhan Secretary & Correspondent, ANITS

#### Patrons: Prof.R.Govardhan Rao Director (Admin), ANITS Prof.K.V.S.V.N.Raju, Director (R & D), ANITS Prof. V.S.R.K.Prasad Principal, ANITS

#### **Conveners:**

Registration

Inauguration Tea Break

Lecture –I

Lecture-II

**Practicals** 

Lecture-III

Lecture-IV

Tea Break

Lecture-V

Lunch

Lecture-VI

Presentations

valedictory

Lunch

Dr.S.Sivakumar Asst.Professor Dept of Chemistry, ANITS (sivakumar.chemistry@anits.edu.in)

Dr.N.Padmaja Associate Professor & HOD Dept of Chemistry, ANITS (hod\_chemistry@anits.edu.in)

#### **Co-Ordinators**

Dr.M.Padma latha Mr.S.V.Satish Mr. R.Somasekhar Ms. R.Sarada Dr.M.Nookaraju Mr.B.Praveen Kumar

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## Anil Neerukonda Institute of Technology & Science

Sangivalasa, Bheemunipatnam Mandal Visakhapatnam – 531 162 Fax: 08933 226394





TWO DAY WORKSHOP ON

# "Nuclear energy and future perspectives in Indian context"

# 10<sup>th</sup> & 11<sup>th</sup> February, 2016



Organized by

Department of *Chemístry* 

Anil Neerukonda Institute of Technology & Sciences Sangivalasa, Visakhapatnam – 531 162

#### ANITS

Anil Neerukonda Institute of technology & Sciences (ANITS) was established in the academic year 2001-02 with the approval of the AICTE, New Delhi and the Government of Andhra Pradesh and is permanently affiliated to Andhra University (AU), Visakhapatnam. The institute has been accredited and reaccredited by NBA for all eligible courses and in 2014 it is accredited with A grade by NAAC. The institute is approved under UGC Section 2(f) and 12(B) and is 27Kms from Visakhapatnam.

Institute's Vision is to emerge as a world- class technical institution whose products represent a good blend of technological excellence and the best of human values.

Institute's Mission is to train young men and women into component and confident engineers with excellent communicational skills, to face the challenges of future technology changes, by imparting holistic technical education using the best of infrastructure, outstanding technical and teaching expertise and an exemplary work culture, besides molding them into good citizens.

ANITS is ranked 4<sup>th</sup> emerging college of excellence among the private engineering colleges of the nation, and the 9<sup>th</sup> among the top private engineering colleges in the A.P in a survey of CSR - GHRDC. Carrier 360 survey rated AAA grade among best engineering colleges of AP 2012.

#### IANCAS

Indian Association of Nuclear Chemists and Allied Scientists was founded in 1981 with the objective of popularising nuclear sciences among the scientific community in our country. The emphasis being on nuclear and radiochemistry, use of radioisotopes & radiation sources in education, research, agriculture, medicine and industry.

Throughout the last two decades, **IANCAS** has registered a continuous growth in terms of membership and its activities. Today, it has about 1150 life members and 20 corporate members. The membership covers a wide spectrum hailing from several internationally reputed research organisations, universities and industries from all over the country and abroad.

To its credit, this Association has organised number of symposia, seminars, Workshops and exhibitions in various institutions all over the country and has also been publishing a thematic bulletin regularly covering the frontiers in nuclear science and technology. Today, the Association has become a forum for pursuing and propagating nuclear sciences and endeavours to motivate scientists to achieve excellence in the field of nuclear and allied sciences.

IANCAS looks forward to greater participation by all concerned especially the younger generation, to accomplish its objectives.

#### ABOUT DEPARTMENT OF CHEMISTRY

Department of chemistry is equipped with three spacious labs of Engineering chemistry & Organic chemistry can accommodate 36 students at a time in each lab. It is provided with excellent infrastructure facilities & eminent faculty from various discipline of chemistry. The department was sanctioned three Minor UGC research projects in years 2014 & 2015. The faculty can handle various consultancy services like water quality testing & are involved in various research activities.

#### ABOUTWORKSHOP

Although India is the fifth-largest producer of electricity, about 40 % of the population of the country does not have access to electricity today. The per capita consumption of electricity, which has a direct correlation with the Human Development Index, is very low at about 700 kWh per annum, about a fourth of world average and way below that of advanced countries. There exist shortages in energy and peak power in the range 10-15%.

Rapid economic growth is also critical to achieve developmental objectives and poverty alleviation. In fact, a sustained economic growth of about 8 to 10% is needed over the next few decades. As electricity is a key driver for economic growth, it is necessary that there is a massive augmentation in electricity capacity, apart from transmissions and distribution systems.

The Integrated Energy Policy of the country projects the need for an installed capacity of about 778 GW by the year 2032 for a growth rate of 8%, of which nuclear power is envisaged to be about 63 GW by 2032.

However for India's energy resource profile, it is inevitable that the long-term electricity needs have to come from nuclear energy. Thus, capacity addition in line with the three-stage programme of FBRs for the multiplier effect and followed by thorium-based systems for long-term sustainability of the capacity need to be pursued vigorously, while LWRs based on international cooperation will play an important role in the near term. The integration of LWRs into the three-stage programme, when spent fuel of LWRs is reprocessed to fuel the down-the-line FBRs is crucial for meeting the long-term electricity requirements.

In this regard the Departments of **Chemistry** from ANITS in association with **IANCAS** wish to organize a two day national workshop on "**Nuclear energy and future perspectives in Indian context**".

This Workshop includes invited talks and practical sessions by renowned persons in the field of nuclear chemistry from Fuel Chemistry Division, Indira Gandhi Centre for Atomic research, Kalpakkam.

These discourses will intend to enlight the students about the nuclear power programs in India and their role for making India the leading nuclear Power producer with sustained economic growth.

Registration Fee for students	Rs.100/-
Last date for registration	25-01-2016

The age of the fossil fuels is over	It's time to move on	N-Power Empowers India