

# Science Academies Lecture Workshop

On  
**Science of Molecular Materials  
and Energy Systems**

**January 30 – February 01  
2018**



**Organized by:**

**St. Xavier's College Ranchi,  
Jharkhand**

(An Autonomous College of Ranchi University)

**NAAC "A"  
CPE**

**Sponsored by**



IASc



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**How to apply**

University/college/technical college teachers, scholars and students at under graduate/**post graduate** and research level dealing with material science and energy systems are invited to apply for participation.

Please write to the coordinator giving your educational qualifications, address for communication, mobile number & e-mail address to the workshop coordinator by post/ e-mail on or before **15<sup>th</sup> January, 2018**.

There is no registration fee for attending the workshop. No TA/DA will be provided to the participants.

**Speakers**

**Professor K. L. Narasimhan,  
IIT Bombay, Mumbai**

**Professor P. K. Das,  
IISc, Bengaluru**

**Dr. Sheela K. Ramasesha,  
NIAS, Bengaluru**

**Professor Satish Patil,  
IISc, Bengaluru**

**Dr. Anshu Pandey,  
IISc, Bengaluru**

**Professor S. Ramasesha,  
IISc, Bengaluru**

**Convenors**

**Prof S Ramasesha, IISc Bengaluru**

**and**

**Fr Dr Nicholas Tete s.j Principal,  
St Xavier's College, Ranchi**

**Coordinator**

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## Indian Academy of Sciences

The *Indian Academy of Sciences* (IASc), Bangalore was founded in 1934 by C. V. Raman. Its objectives include promoting the progress of science in pure and applied branches. Major activities include organizing meetings for discussions on important topics, publication of scientific journals, recognizing scientific talent, improvement of science education and taking up other issues of concern to the scientific community.

## Indian National Science Academy

The *Indian National Science Academy* (INSA), New Delhi was founded in 1935, is a premier science academy in the country, plays crucial role in promoting, recognizing and rewarding excellence. .

## National Academy of Sciences

The *National Academy of Sciences* (NASI), Allahabad, was founded in 1930. the main objective of the academy is to provide a national forum for the publication of research work carried out by Indian scientists .

## St. Xavier's College Ranchi

St. Xavier's College, Ranchi is a Minority Educational Institution based on religion established and administered by the Ranchi Jesuit Province of the Society of Jesus. The College is registered by the Ranchi Province under the local title 'Xaviers Ranchi' under the Society's Registration Act XXI of 1860 and affiliated to Ranchi University Ranchi. While preference is shown to the educational and cultural needs of the Minority community, admission is open to all irrespective of caste, creed and nationality. St. Xavier's College, Ranchi is a premier institution of the State of Jharkhand, imparting quality education and has remained a centre of excellence till date. The University Grants Commission conferred Autonomous status to the college in the year 2005 and granted "College with Potential for Excellence" status in 2006. It has been accredited by NAAC with Grade- "A" in 2013



## Objectives of the Workshop

Optical properties of molecular materials is one of the most exciting and important fields of research which has witnessed explosive growth in recent times. They have been of import both from basic science point of view and applications. The aim of the proposed workshop is to introduce the students to basic concepts in light-matter interaction, electron states in molecules and polymers, linear and nonlinear optical phenomena, electronic processes in devices . There will also be talks on molecular electronic devices, synthesizing polymers for niche applications and harnessing solar energy through photovoltaics and other technologies will be covered.

## Topics To be Covered

1. Electron States in Molecules and Polymers
2. Probing Electron States of Matter
3. Nonlinear Optic Phenomena in Molecular Materials
4. Molecular Optical and Electronic Devices
5. Synthetic Strategies for Device Molecules
6. Harvesting Solar Energy