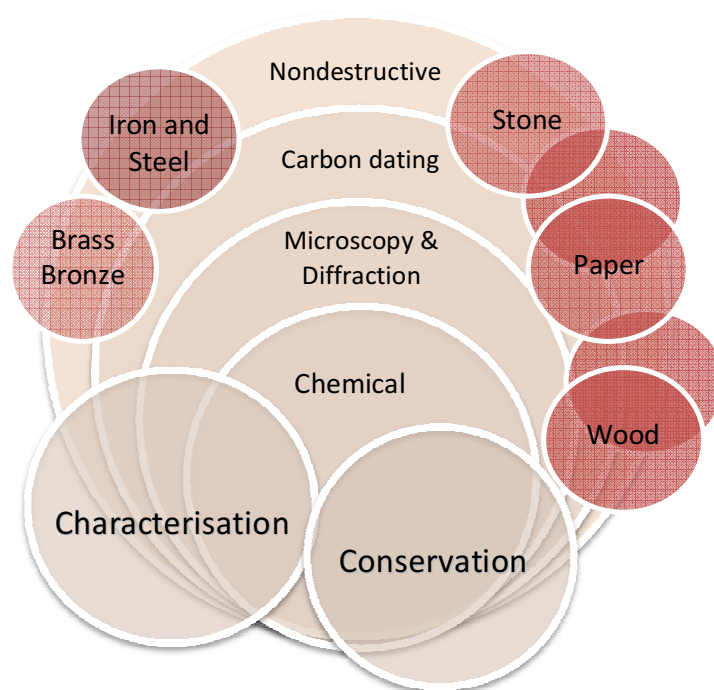
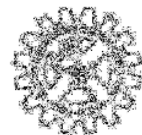


# School on Characterisation and Conservation of Archaeological Objects

*(under the aegis of INAE Study Group on  
Indian Engineering Heritage on Metallurgy)*



13-17 October, 2014



CSIR-National Metallurgical Laboratory  
Jamshedpur

## Background

The **'INAE Study Group on Indian Engineering Heritage on Metallurgy'** (<http://www.inae.in/projects.html>) was constituted in 1996 to carry out studies related to metallurgical heritage. Prof. S. Ranganathan (Professor, IISc/NIAS); formerly, President, Indian Institute of Metals) was the founder Chairman of the Study Group which is now headed by Dr. Baldev Raj (President, INAE; Director, NIAS) as Honorary Chairman. The Study Group is actively involved in promoting the cause of Indian heritage in metals and alloys as well as in the conservation of archaeological relics of the country. Long term sustainability of these activities calls for building of human resources and an inter-disciplinary approach involving metallurgists, material scientists, historians and practising archaeologists. A knowledge of the scientific basis of conservation as well as characterisation techniques are key to the systematic learning and practising of this profession. The five day **'School on Characterisation and Conservation of Archaeological Objects'**, targeting students and faculties in archaeology, culture and archaeomaterials, is being organized by the INAE Study Group and will be held at CSIR-National Metallurgical Laboratory during 13-17 October, 2014. The school will cover classroom lectures by leading experts in various areas of conservation and characterisation, experimental demonstrations and visual displays.

## Topics/Themes

The list of topics/themes to be covered is as follows:

- Characterisation and Conservation of Archeological Objects (general)
- Microstructure in metallurgical processing
- Conservation and characterization of iron objects
- Conservation and characterization of brass/bronze objects
- Authenticity test of archeological objects
- Characterisation Techniques
  - Chemical characterization (trace to bulk)
  - Microstructural characterization (Optical and SEM)
  - X-ray based techniques (XRF and XRD)
  - Nondestructive (NDT) techniques
  - Carbon dating
- Clays and clay pottery objects
- Gems and Gemstones in antiquity
- Conservation of stone and archeological monuments
- Conservation of paintings and wooden objects
- Conservation of paper and old manuscripts

## **Faculty**

The indicative list of faculty is given below:

Prof. S. Ranganathan, IAS, Bangalore  
Dr. Baldev Raj, IAS, Bangalore  
Dr. U. Kamachi Mudali, IGCAR, Kalapakkam  
Dr. T. Jayakumar, IGCAR, Kalapakkam  
Dr. V. Jeyaraj, Hepzibah Institute of Heritage Conservation, Chennai  
Prof. Vibha Tripathi, Banaras Hindu University, Varanasi  
Prof. Sharada Srinivasan, IAS, Bangalore  
Dr. K.S. Rana, Archeological Survey of India, Dehradun  
Mr. B.V. Kharbade, National Research Laboratory for Conservation,  
Mr. A. S. Bisht, National Museum, New Delhi  
Mr. Anupam Sah, Chathrapathi Sivaji Maharaj Vastu Sangrahalaya, Mumbai.  
Dr. V.K. Saxena, Archeological Survey of India, Indore  
Dr. V.R.S. Rao, Archeological Survey of India, Hyderabad  
Smt. Shilpa Raturi, Archeological Survey of India, Dehradun  
Sh. D.K. Verma, Archeological Survey of India, Dehradun  
Dr. C.M. Nautiyal, Birbal Sahni Institute of Palaeobotany, Lucknow  
Dr. T.K. Mukherjee, CSIR-Central Glass and Ceramic Research Institute, Kolkata  
Dr. B. Nayak, CSIR-National Metallurgical Laboratory, Jamshedpur  
Dr. B. Ravi Kumar, CSIR-National Metallurgical Laboratory, Jamshedpur  
Dr. Swapan K. Das, CSIR-National Metallurgical Laboratory, Jamshedpur

Majority of the faculty members have already confirmed their participation.

## **Selection**

The purpose of the school is to inspire and bring the youngsters to fore for the long term sustainability and growth of the discipline. The selection of the participants will be on national basis. Travel and accommodation support will be provided to selected candidates.

## **Contact**

Dr. S. Srikanth, Director  
CSIR-National Metallurgical Laboratory,  
Chairman, INAE Study Group on Indian Engineering Heritage on Metallurgy  
Jamshedpur – 831 007  
Email: [srikanth@nmlindia.org/director@nmlindia.org](mailto:srikanth@nmlindia.org/director@nmlindia.org)  
Tel : 0657-2345202/2345028; Fax : 0657-2345213