

Report on HEAM CAM 2013

A national level workshop on **C**haracterization of **A**dvanced **M**aterials



Date : 6th - 8th Nov 2013; Time: 09.30 am- 05.00 pm

Venue: **Talk & Discussion:** Mar Ivanios College, Thiruvananthapuram.

Visit: NIIST, Thiruvananthapuram

‘HEAM CAM’, a two day National Level Workshop on **C**haracterization of **A**dvanced **M**aterials, was one of the most admired programmes conducted by IAHEAM held during the year 2012. On repeated request from the user community **IAHEAM** decided to conduct the programme this year also. ‘HEAM CAM 2013’ was organized in association with Department of Chemistry, Mar Ivanios College, Thiruvananthapuram and the CSIR - National Institute of Interdisciplinary Science and Technology, Thiruvananthapuram. ‘HEAM CAM – 2013’ was held on 6th – 8th November 2013. This program was contributed by eminent scientists from various national research institutions including NIIST, IISER, IIT, IIST, VSSC, CIFT, CECRI, SCTIMST, Central University and NIT. The tutorial sessions covered the topics of AFM, TEM, Confocal microscopy, Laser Flash Photolysis, 2D-NMR, Mass Spectrometry, Inductively Coupled Plasma Atomic Emission Spectrometry, Raman Spectroscopy, Mechanical and Tribological Characterization and other related material characterization techniques for better composites and surfaces.

The program was inaugurated by H.E. Most Rev. Dr Samuel Mar Irenios, Auxillary Bishop, Major Archdiocese of Trivandrum. The Presidential Address was given by Dr. V.N. Rajasekharan Pillai, Executive Vice President of ‘Kerala State Council for Science, Technology & Environment’ and Ex-officio Secretary of Government of Kerala; on Wednesday, the 6th November, 2013 at 9.30 a.m. A Theme Talk was delivered by Mr. M. Shaneeth (*Head, Fuel Cell Section, VSSC / ISRO*).

Other technical talks included in the first day of the program are:

Dr. Manoj Ramma Varma (NIIST, Trivandrum) - TEM - Methods for Nano Characterization.

Dr. M. Junaid Bushiri (CUSAT) – Raman Spectroscopy.

Dr. Mahesh Hariharan (IISER, Trivandrum) – Characterization by AFM.

Dr. Muhamad Ashraf, P. (CIFT, Kochi) – Electrochemical Impedance Spectroscopy and its Applications.

Dr. R. Rajeev (VSSC, TVM) – XRD and its Applications.

The Technical talks in the second day included:

Dr. T.P.D. Rajan (NIIST, Trivandrum) – Mechanical and Tribological Characterization of Materials.

Dr. Edamana Prased (IIT, Madras)- Laser Flash Photolysis and its Technology.

Dr. P.R. Anilkumar (SCTIMST, TVM)- Surface analysis by Confocal Microscopy.

Dr. R. Manu (CECRI, Karaikudi) – Surface Profile Analysis using XPS.

Dr. J. Mary Gladis (IIST, Trivandrum) – Multi Elemental Analysis using Inductively Coupled Plasma Atomic Emission Spectrometry.

Dr. L. Ravisankar (NIIST, Trivandrum) – NMR of Organic Molecules.

Dr. Jobin Cyriac (IIST, Trivandrum) - Applications of Mass Spectrometry.

The Technical talks in the third day included:

Dr. S. Nagarajan (Central University, Tamil Nadu) - STM and its application to nanoscience and technology.

Dr. A. Sreekanth (NIT, Thiruchirappalli) - Applications of 2D and 3D NMR.

Many research scholars, young scientists, engineers and faculties participated in the program. Many people suggested and encouraged to propose new programs. About fifty participants came from outside the state. The convener collected the feed back from the participants.

The team of IAHEAM highly appreciated Dr. Suja Marthai (Convenor) and Dr. Suju C. Joseph (Organizing secretary) for organizing the event very efficiently along with the encouragement of Mr. V. Varghese (HoD) and other faculty members of the Department.
