

# J N C NEWS

**Jawaharlal Nehru Centre for Advanced Scientific Research**

(A Deemed University)

Jakkur, Bangalore - 560 064

May 2011

No. 36



Dear Colleagues,

*It's quite heartening that several of our faculty members have received prestigious recognitions from India and abroad for their outstanding achievements. The efforts of Prof C N R Rao and Prof Umesh Waghmare's group to find a new way to address the challenge of the energy crisis in the form of using graphene in hydrogen storage is laudable. Several patent applications have been filed for new inventions.*

*It is a matter of great pride that Prof P Rama Rao, the Chairman of our Council of Management has been awarded the highest civilian recognition, **Padma Vibhushan** by the Government of India.*

*The Centre is also progressing well in its academic pursuits. Several new faculty members have joined. The new Postgraduate Diploma programme in Science Education which is beginning from the current academic year has received very good response from all over the country.*

*The activities of C N R Rao Hall of Science and Education Technology Unit in popularizing Science have picked up momentum. The Centre has also actively participated in celebrating International Year of Chemistry by conducting conferences and workshops.*

**M R S Rao**  
President

## FROM THE EDITOR'S DESK

Prof. CNR Rao has been conferred with the Dhirubhai Ambani Life Time Achievement Award 2010 by the UDCT alumni association for his monumental contributions to Chemical Sciences and his visionary leadership of Indian Science for decades.

Prof P Rama Rao, distinguished materials scientist and the Chairman of the Council of Management of the Centre has been chosen for the *Padma Vibhushan* award by the Govt of India.

Prof CNR Rao's group along with the group of researchers led by Prof Umesh V Waghmare have found a new way to go around the tough challenge that scientists and industries face while trying to store hydrogen in a solid matrix. They have devised a unique storage medium — extremely thin graphite flakes called *Few-Layer Graphene* — which can capture the gas and release it upon heating or ultra-violet irradiation.

Karnataka State Open University (KSOU) has honoured Prof CNR Rao with Honoris Causa D.Litt. Degree for his life time achievement in his field of research.

US Patent is granted to Prof. Tapas Kumar Kundu, Selvi BR, Kishore AH, Mantelingu K for their invention related to ellagic acid (TBBD) and its derivatives as site-specific inhibitor of histone methyltransferase, especially CARM1 arginine methyltransferase.

The Indian Patent Office has granted Patent (No. 245033) to JNCASR and the University of Mysore, for the invention "Derivatives Of 4,6-Disubstituted 1,2,4-Triazole-1,3,4-Thiadiazole, A Process and Uses Thereof", inventors being Prof. Tapas Kumar Kundu, Dr. Varier RA, Mr. Shivananju N, Dr. Basappa, Prof. Rangappa KS. The invention reports anti squamous cancer (cervical and oral) specific compounds having tremendous potential to be used as lead molecules.

Dr. B. L. Bhargava, JNCASR alumnus won the Molecular Physics Longuet-Higgins Young Author's Prize 2009, for his outstanding work with Michael Klein on the molecular dynamics simulation of micelles in room temperature solutions of ionic liquids.

Our knowledge about nanocrystals has been advanced by the research findings of Prof. G.U. Kulkarni and B Radha (PhD student, CPMU). They have developed a simple, inexpensive direct micromolding method for patterning Au nanocrystal superlattices using an elastomeric stamp hosting microchannels.

Dr. Subi J George (NCU) and Dr. M. Eswaramoorthy's group (CPMU) have designed highly fluorescent novel hybrid hydrogels by mixing clay materials with fluorescent dye molecules.

Ritu Gupta (Int. PhD student, CPMU) has received the Best Poster entitled "Defining a local Figure of Merit for Metal Nanowire Grating Patterns as Transparent Conductors" at the National Review and Coordination Meeting of NANO Mission Council organized by IIT Delhi from 25th -27th February 2011.

## PROMOTIONS

### Professor

Prof Chandrabhas Narayana  
Prof Vijay Kumar Sharma

### Associate Professor

Dr Ganesh Subramanian

## NEW APPOINTMENTS

### Faculty Fellow

Dr Ranjani Viswanatha (ICMS)

### Faculty Fellow &

Wellcome Trust-DBT India

Alliance Intermediate Fellow

Dr Ravi R Manjithaya (MBGU)

DST Ramanujan Fellow

Dr Sebastian C Peter (NCU)

Dr Ujjal K Gautam (NCU)

## AWARDS & RECOGNITIONS

### Prof CNR Rao

Dhirubhai Ambani Life-Achievement Award for Innovation, 2011

EDGE Education Personality Award 2011 by EDGE Forum

D. Litt., Karnataka State Open University

### Prof Anuranjan Anand

Fellow of Indian Academy of Sciences

### Prof Chandrabhas Narayana

Sir C.V. Raman Young Scientist award 2008, Govt. of Karnataka

### Prof G U Kulkarni

MRSI-ICSC Superconductivity and Materials Science Annual Prize – 2011

### Prof Swapan K Pati

Elected as the Fellow of the National Academy of Sciences (2010)

### Prof Tapas K Kundu

Joined editorial board of the Journal of Biological Chemistry (JBC) for a period of five years from July 01, 2011

### Dr A Sundaresan

CRSI Bronze Medal 2011

### Dr M Eswaramoorthy

MRSI Medal – 2011

### Dr Rajesh Ganapathy

Associate, Indian Academy of Sciences, Bangalore, 2010

### Dr Subir K Das, TSU

Associateship of the International Centre for Theoretical Physics, Trieste, Italy

### Dr T Govindaraju, NCU

INSA Medal for Young Scientist, 2011

Young Biotechnologist Award 2010, DBT

### Dr Tapas Kumar Maji

Chosen as one of the emerging investigators in Materials Science by JMC

### Mr S Sachin Belvadi

Kempegowda State Award

## INTERNATIONAL CENTRE FOR MATERIALS SCIENCE (ICMS)

- MoU with Scuola Internazionale superior di Studi Avanzati (SISSA), Trieste, Italy
- Workshop on Multiscale Modelling and simulations of Materials with UCL, London
- Third International Materials Lecture, by Prof. Sir Richard Friend, Cavendish Laboratory, University of Cambridge, on December 6, 2010.
- Collaborations with Waterloo Institute of Nanotechnology and RMIT, Australia
- 10 short term visitors.

### International Year of Chemistry & Chemistry Symposium

The Centre held a Chemistry Symposium during January 2011 which brought together scientists from abroad and country to deliver series of lectures on different topics related to Chemistry. These lectures were followed by chemistry based programmes for students at Prof CNR Rao Hall of Science. This international symposium was also considered as

## SHORT TERM APPOINTMENTS

### Warden

Prof SM Shivaprasad

### Associate Warden

Dr TNC Vidya

### INSA Scientists

Dr AH Pandith

Dr SB Kesrale

### Visiting Scientists

Dr Mousumi Upadhyay-Kahaly

Prof Suchi Guha

Dr Massimo Barbagallo

Dr Nahla Ali

part of the National Science Day celebrations.

### National Science Day

The Centre celebrated National Science Day on February 24, 2011 as the theme “*Chemistry in our lives*”, organizing series of lectures for students and teachers from different Navodaya schools of the state at CNR Rao Hall of Science which received overwhelming participation. Prof CNR Rao gave the introductory lecture followed by scientists from IISc and JNC.

## OTHER PROGRAMMES

DST Nurtured Institutes Meet was held on 22nd December 2010 under the chairmanship of Prof. CNR Rao

### Talks by Faculty

#### Prof CNR Rao

*Acharya Prafulla Chandra Ray Memorial Lecture*, Prof CNR Rao, December 12, 2010, at IISER, Kolkata.

*A.D. Little Lecturer in Chemistry*, Massachusetts Institute of Technology, 2010.

*1<sup>st</sup> PC Ray Lecture*, IACS Kolkata, 2010.

#### Prof. Srikanth Sastry

*Jamming and void space in particle packings: From glasses to globular proteins*, March 22, 2011.

### Visits

*Prof. Martinelli and Prof. Stefano Baroni*, Scuola Internazionale Superiore DI Studi Avanzati, (SISSA), Trieste, Italy, December 1, 2010

*Delegates from EMBO*, January 7, 2011

*European delegates*, January 7, 2011

*Dr. Michiel Kolman*, Senior Vice President, Global Academic Relations, Elsevier, January 7, 2011

*Dr. Margarate Gardner*, Vice-Chancellor, the Royal Melbourne Institute of Technology University, Australia and delegates, February 7, 2011

*Russian Delegates*, February 8, 2011

*JST Officials*, February 9, 2011

*Delegates from Oak Ridge Association of University, University of Johannesburg, Canadian Institute of Advanced Research, University of Alberta*

*Delegates from US Universities* (working in the field of biomedical imaging, particularly cancer), February 15, 2011

*Prof. Norio Nakatsuji*, Director, Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto, Japan, April 18, 2011

*Russian Parliamentary Delegation* of the State Duma Committee on Science and Science Intensive Technologies led by its Chairman H.E. A.A. Chereshev, April 21, 2011

## ENDOWMENT LECTURES

**Michael Faraday Lecture:** *Personalized Energy for 1 (X 6 Billion)*, Prof. Dan Nocera, The Henry Dreyfus Professor of Energy & Prof. of Chemistry, Massachusetts Institute of Technology, Cambridge, March 21st, 2011

**A V Rama Rao Foundation Lectures in Chemistry:** *Phosphorus-Supported Ligands: Versatile Coordination Platforms for the Assembly of Molecular Materials*, Prof. V. Chandrasekhar, Department of Chemistry, Indian Institute of Technology Kanpur; and **Prize Lecture:** *Hybrid Nanomaterials for Sensing and Light Energy Conversion*, Prof. George Thomas, School of Chemistry, Indian Institute of Science Education and Research, Trivandrum, May 13, 2011.

## FLUID DYNAMICS COLLOQUIA

*Subgrid modeling: gaining insights from the subgrid conservation equations*, Dr. Sanjiv Ramachandran, Postdoctoral research associate, University of Massachusetts, Dartmouth, USA, USA, January 5, 2011.

## IPR LECTURES

*Patent Risk Analysis*, Dr. Kalyan C. Kankanala, Chief Knowledge Officer and Co-Founder, BrainLeague IP Services, December 13, 2010.

*IP Valuation*, Ms. Anjana Vivek, Founder, VentureBean Consulting, November 9, 2011.

## DISCUSSION MEETINGS

The following discussion meetings were supported by the Centre. The meetings were organized by its faculty in association with faculty of other reputed research institutions in various areas of current interest. *National Symposium on Frontiers Main Group & Organometallic*

*Chemistry (NSFMOC)*, November 20, 2010, Prof. A.G. Samuelson, IISc.

*Frontiers in Inorganic Chemistry (FIC-2010)*, December 11-13, 2010, Prof. Sreebrata Goswami, IACS.

*3rd meeting of the Asian Forum of Chromosome & Chromatin Biology*, December 4-6, 2010, Prof. Tapas Kumar Kundu, JNCASR.

*International Conference on Quantum Effects in Solids of Today (I-Con QUEST-2010)*, December 20-23, Prof. R.C. Bhudhani, IITK.

*JNCASR/SISSA/IBM School on First Principles Simulations*, December 29, 2010 – January 2, 2011, Prof. Shobhana Narasimhan, JNCASR.

*AIM Network Meeting*, January 2011, Prof. Rama Govindarajan, JNCASR.

*JNCASR-UCL Workshop on Multiscale Modelling and Simulations of Materials*, January 11-13, 2010, Prof. Umesh V. Waghmare, JNCASR

*Discussion on Ferroelectric and Piezoelectric Materials*, Dr. Dr. Joseph T. Evans, Jr. President of M/S Radiant Technologies Inc., USA on 20-01-2011.

*International Womens Day, March 8, 2011*, Mrs. Padma Vasudevan, IISc

*2nd National Molecular Virology Meeting*, April 29-30, 2011, Prof. C. Durga Rao, IISc

*Science Outreach Programme – Summer 2011*, May 18-19, 2011, Prof. K.S. Valdiya, JNCASR.

### SCHOOLS/WORKSHOPS/CONFERENCES

*Winter School*, December 6 -10, 2010.

*JNCASR-UCL Workshop on Multiscale Modelling & Simulations of Materials*, January 11-13, 2011, Prof. Umesh Waghmare, JNCASR.

*DST Nano School*, January 18- 22 2011.

*MBGU Symposium*: Prof. Xiankai Sun, Prof. Matthew A. Lewis, Prof. Kevin M. Bennett, Prof. Vikram D. Kodibagkar February 15, 2011.

*JNCASR- iCeMS Mini Symposium*, organized by JNCASR and Institute for Integrated Cell-Material Sciences (iCeMS), Kyoto, April 18, 2011.

### FORTHCOMING MEETINGS

*Winter School on Physics and Chemistry of Materials*, convenors: Dr. A. Sundaresan and Prof. Swapan K. Pati, December 5-9, 2011, JNCASR

### SEMINARS

Prof. Christoph Schneider, Institut of Organische Chemie, Universitt Leipzig, Johannisallee 29, D-04103 Leipzig, Germany, December 14, 2010.

*Imaging and spectroscopy of wet electron states on TiO<sub>2</sub>*, Prof. Geoff Thornton, London Centre for Nanotechnology and Chemistry Department, UCL, December 14, 2010.

*Advanced Electron Microscopy Study of Nanoscale Structures and Defects in Functional Materials*, Prof. Jiaqing He, Department of Chemistry, Northwestern University, December 16, 2010.

Prof David Cahen, Weizmann Inst. of Science, Israel, December 20, 2010

*Fluctuations, Response, Entropy and Temperature in Granular Packings*, Prof Bulbul Chakraborty, Physics Department, Brandeis University, Waltham, December 21, 2010.

*Expanded Self-Similarity Works for Burgers Equation - and Why*, Prof. Uriel Frisch, December 23, 2010.

*Spin dynamics of a strongly interacting quantum dot coupled to ferromagnetic lead*, Dr. Sourin Das, Department of Physics and Astrophysics, University of Delhi, Delhi - 110 007, December 24, 2010.

*Retrieving Quantum Information Despite Decoherence*, Prof Sushanta Dattagupta, Indian Institute of Science Education & Research Kolkata, Mohanpur Campus, West Bengal, December 28, 2010.

*How Can Cells Robustly Sense Their Microenvironment to Respond Correctly*, Prof Michael Sheetz, Columbia University, USA & Mechanobiology Institute, Singapore, December 29, 2010.

*Mechanosensing and control of bacterial pathogenesis*, Prof Linda Kenny, University of Illinois, USA & Mechanobiology Institute, Singapore, December 29, 2010.

*EMBO Lecture series*, January 7, 2011

*Retroelements in the brain: boon or bane?* Prof. Joseph Mathew Anthony, Sunny Brook Health Sciences Center, Toronto, January 11, 2011.

Prof Santhosh Kar, Jawaharlal Nehru University, New Delhi, January 13, 2011.

*Towards a cure for cancer*, Dr Shiladitya Sengupta, Medicine and Health Sciences and Technology, Harvard Medical School, Brigham and Women's Hospital, USA, January 13, 2011.

*CTBP is a critical determinant of the Retinoic acid signaling pathway*, Dr Prashanth Kumar B R, Dept of Molecular Carcinogenesis, Netherlands Cancer Institute, Amsterdam, January 27, 2011.

*Plasmodium Enolase: Attempts to Understand its Biological Functions*, Prof Gotam K Jarori, Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai, January 31, 2011.

*Local probe investigation of spin transport and dynamics in organic semiconductors*, Dr AJ Drew, Queen Mary University of London, February 7, 2011.

*Electrochemical studies of conducting polymers and nanomaterials*, Dr Snehangshu Patra, Weizmann Institute of Science, Rehovot, Israel, February 8, 2011.

*Modelling properties of protein-solvent systems*, Dr Juergen Pleiss, Institute of Technical Biochemistry, University of Stuttgart, Germany, February 8, 2011.

*Nanotechnology: some aspects and application in biomedicine*, Dr Supratim Giri, Post Doctoral Fellow, Institute of Biomaterials and Biomedical Engineering, University of Toronto, Canada, February 8, 2011.

*Beyond Oil and Gas*, Prof GK Surya Prakash, Professor and George A. and Judith A. Olah Nobel Laureate Chair in Hydrocarbon Chemistry Director, Loker Hydrocarbon Research Institute and Department of Chemistry, University of Southern Cal, February 17, 2011.

*Epigenetic regulation of skeletal muscle differentiation*, Prof Reshma Taneja, Department of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, February 18, 2011.

*Observations near Transitions in Combustion and Flow Phenomena*, Dr TM Muruganandam, February 22, 2011.

*Frustration and Field Induced Neel order on the honeycomb lattice*, Dr Arun Paramekanti, University of Toronto, February 22, 2011.

*DNA Demethylation during Zebrafish Development and Colon Cancer*, Dr Kunal Rai, Dana-Farber Cancer Institute, Harvard University, Boston, MA, February 23, 2011.

*Discovery and functional analysis of a novel human epigenetic mark*, Dr Chandrima Das, Dept. of Biochemistry & Molecular Biology, University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA. March 1, 2011.

*Molecular simulation studies on gas-hydrates*, Prof Sudeep N Punnathanam, Assistant Professor, Dept. of Chemical Engineering, Indian Institute of Science, Bangalore – 560012, March 1, 2011.

*Exploring the Nano-Bio Interface with Molecular Dynamics Simulation*, Dr Bob Johnson, Institute for Computational Molecular Science, Temple University, Philadelphia, USA, March 7, 2011.

*Probing Electrons and Phonons in Graphene by Resonance Raman Scattering*, Prof Marcos A Pimenta Departamento de Fisica, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil, March 7, 2011.

*Perfect Entanglement Transport in A Quantum Spin Chain System*, Dr Sujit Sarkar, PoornaPrajna Institute of Scientific Research, Bangalore-5600 80, India, March 7, 2011.

*Tuning the Optical and Structural Properties of Organic Semiconductors*, Dr Suchi Guha, University of Missouri, USA, March 9, 2011.

*Recent Developments in Organolanthanide Chemistry*, Dr Ajay Venugopal, Humboldt Research Fellow, Institute for Inorganic Chemistry - RWTH, Aachen, Germany, March 10, 2011.

*Tuning optical and structural properties of blue-emitting polymeric semiconductor and Triplet excitations in polymer devices*, Prof Sushmita Guha, University of Missouri, USA, March 18, 2011.



Dr. Murali Gururajan, Dept. of Hematology/Oncology, Cedars-Sinai Medical Center, Los Angeles, California, USA, March 28, 2011.

*MicroRNAs: Role in human B cell differentiation and B cell derived diseases*, Dr Murali Gururajan, Cedars-Sinai Medical Center, Los Angeles, USA, March 28, 2011.

*Dense granular flows: Correlation-response relations in a far-from-equilibrium system*, Prof V Kumaran, Chemical Engineering Department, Indian Institute of Sciences, Bangalore-12, March 29, 2011.

*Synaptic plasticity at the C. elegans Neuromuscular Junction*, Dr Kavita Babu, Massachusetts General Hospital & Harvard University, Boston, USA, April 4, 2011.

*Stability Theory and Turbulent Wall Flow*, Dr Srinivas Veeravalli, IIT Delhi, April 7, 2011.

*Femtosecond Interfacial Electron Transfer Dynamics in Dye-Quantum Sensitized Solar Cell*, Dr Hiren Ghosh, BARC, Mumbai April 11, 2011.

*Watching electrons in nanostructures*, Dr Jerome Lagoute, University of Paris-Dederot, France, April 26, 2011.

*Mechanobiology: An Evolving Science at the Interface*, Dr Sitikantha Roy, Biomedical Engineering Department, Johns Hopkins University, April 30, 2011.

*Mechanism of In-vivo Transport by Multiple Molecular Motors*, Dr Ambarish Kunwar, Department of Neurobiology, Physiology & Behavior, University of California, Davis, May 6, 2011.

*Charge-transfer chromophores for advanced applications: optical properties and essential-state models*, Dr Cristina Sissa, Department of Chemistry GIAF, University of Parma, May 10, 2011.

*Solute rotation in polar liquids: Microscopic basis for the SED model*, Dr Jaydeb Chakrabarti, S N Bose National Centre for Basic Sciences, Kolkata, India, May 16, 2011.

*Electrochemical transformation of Multiwalled Carbon Nanotubes graphene Layers*, Dr Vijayamohan Pillai, NCL Pune & Director, CECRI, May 18, 2011.

*Photoconductivity anisotropy study in uniaxially aligned polymer based planar photodiodes*, Dr Dhritiman Gupta, Cambridge University, May 20, 2011.

### PROJECT ORIENTED CHEMICAL EDUCATION (POCE) AND PROJECT ORIENTED BIOLOGICAL EDUCATION (POBE) PROGRAMMES

Under POCE, 11 fresh fellowships were awarded for the year 2011. Ten students have joined the programme which commenced on 16 May, 2011. These students will attend lectures given by faculty of the Centre and Indian Institute of Science. Students from POCE batches of 2009, 2010 will work under the faculty of CPMU, NCU, ICMS and TSU of the Centre.

Under POBE, 10 fresh fellowships were awarded for 2011. Nine students have joined the programme which commenced on 16 May 2011. These students will attend lectures given by faculty of the Centre, Indian Institute of Science, IISER Pune etc. POBE batches of 2009, 2010 will work under the faculty of MBGU and EOBU of the Centre.

The batch of 2009 from POCE and POBE will be receiving their Diploma certificates in Chemistry and Biology respectively this summer on successful completion of their 3 year project training.

### SUMMER RESEARCH FELLOWSHIPS PROGRAMME - 2011

The fellowships are supported by the Department of Science & Technology, Government of India; the Rajiv Gandhi Institute for Contemporary Studies, New Delhi, and the Centre. 87 fellowships were awarded for the year 2011 out of 3425 applications received. Students are placed under faculty at the Centre or with scientists elsewhere in India.

### JNCASR-CCSTDS FELLOWSHIPS 2011

This programme which is jointly instituted by the Centre and the Centre for Co-operation in Science & Technology Among Developing Societies (CCSTDS), Chennai aims to promote co-operation among

developing regions.

The following 8 fellowships were awarded under this programme for the year 2011:

#### Names (Host institutions)

1. Mr Buddhika Dilhan Madurapperuma. A.A, Sri Lanka - (Indian Institute of Remote Sensing, Dehradun)
2. Mr Md. Nabur Rahman, Bangladesh - (Tezpur University, Assam)
3. Dr Dzoyen Jean Paul, Cameroon - (Indian Institute of Integrative Medicine, Jammu)
4. Mr Oludele Banji Ogunrinala, Nigeria - (Anna University, Chennai)
5. Mr Kehinde Adewale Akinsinde, Nigeria - (NICED, Kolkata)
6. Dr Olajuwan Bakai Ishola, Nigeria - (IIT, Madras)
7. Dr Karlygash Seytomarovna Absattarova, Kazakhstan - Indian (Institute of Technology, Roorkee.)
8. Dr Nurbanu Kilishpekova Akhmetzhanova, Kazakhstan - (Indian Institute of Technology, Roorkee)

### VISITING FELLOWSHIPS – 2010-2011

For the year 2010-11, out of 15 applications received, 9 were selected from Physical Sciences category and 1 from Life Sciences category.

#### Names (Guide's Name)

1. Dr Mane Vishwas Ganpatrao, (Prof CNR Rao) Asst Prof, Dr BAM University, Aurangabad, Maharashtra
2. Dr Syed Khasim (Prof KS Narayan) Asst Prof, PESSE, Bangalore, Karnataka
3. Dr Goutam Kumar Patra (Dr Tapas Kumar Maji) Asst Prof, VJR College, Jadavpur, Kolkata, West Bengal
4. Dr Vijay Kumar Lamba (Prof Swapan K Pati) Assoc Prof, HCTM, Kaithal, Haryana
5. Dr Satish Kumar Maruri (Prof G U Kulkarni) Asst Prof, VVIET, Mysore, Karnataka
6. Dr Joy Mitra (Prof Umesh V Waghmare) Scientific Officer-F, BARC, Mumbai, Maharashtra
7. Dr K. Subaharan (Dr M Eswaramoorthy) Senior Scientist, CPCRI, Kasaragod, Kerala
8. Dr Elankumar Kannan (Dr A Sundaresan) Asst Prof, RKM-VC, Chennai, Tamil Nadu
9. Dr Anandavadivel (Prof Umesh V Waghmare) Asst Prof, SVCE, Chennai, Tamil Nadu
10. Dr Suvroma Gupta (Prof Tapas Kumar Kundu) Lecturer, Haldia Inst of Tech, Haldia, West Bengal

### POST GRADUATE DIPLOMA PROGRAMME IN SCIENCE EDUCATION

In order to provide opportunities to teachers and others to obtain training and for carrying out science education projects, this Centre is offering a post graduate diploma programme in science education. Some of the aspects covered in the proposed programme would be courses related to subject content, laboratory experiments, research experience and experience in education technology. The training will be provided through projects and few formal courses. The programme will be for one year (for full-time students), at the end of which they will be given a post-graduate diploma in science education. The programme will take two years for teachers in service who do this on a part-time basis. Advertisement for this programme was released in all the major newspapers of the country. Around 600 applications were received and 11 candidates have been shortlisted for the programme which will commence on 1 August 2011.

### ANNUAL FACULTY MEETING

The Annual Faculty Meeting of the Centre is scheduled to be held on November 14, 2011 which will be followed by lectures by the Faculty and Honorary Faculty members. An In-house symposium is scheduled to be held on November 15, 2011 at Jakkur campus.