

Parkinson's disease to study the role played by the external stimulus on the occurrence of event-related synchronization or de-synchronization.

Subhasish Dey (IIT, Kharagpur) described experimental studies by his group aimed at quantifying the near-bed turbulence parameters of mobile-bed flows with non-cohesive bed-load sediment transport and compared them with those in clear-water flows. S. R. Barman (Consortium for Scientific Research, Indore) described the search for single-element quasicrystalline metallic films, which have been achieved so far for copper, antimony and bismuth. The question still remains whether such quasicrystallinity can be induced in free-electron metals. R. P. Chhabra (IIT, Kanpur) defined a visco-plastic fluid, which deforms (shears) only when the applied shear stress exceeds a threshold level, a problem most researchers face in developing products. Moreover, most products used in our daily life are suspensions. An understanding of the hydrodynamics of particles in visco-plastic fluids is therefore required.

Utpal Sarkar (PRL, Ahmedabad) attempted to analyse what would happen if neutrinos did travel faster than light. This was in the context of an apparent discovery of such faster-than-light neutrinos. He discussed some of the theoretical issues and implications of the effect and gave examples of situations that would violate other experimentally observed facts.

K. Porsezian (Pondicherry University, Puducherry) gave an introduction on the use of super-continuum generation (SCG) in photonic crystal fibres. The discovery, properties and applications of SCG using photonic crystal fibres were discussed in-depth. He stated the differences between the conventional and photonic crystal fibres. Some of the important properties of different fibres, its cause and effects were highlighted. S. J. Bhatt (Sardar Patel University, Vallabh Vidyanagar) talked about the different structures in  $C^*$ -algebras. A general approach to the construction of such differential structures and their regularity properties were described using several examples.

R. K. Kohli (Panjab University, Chandigarh) referred to the Eucalypt plantations controversy (Karnataka 1980–90s), in which the tree was accused of draining more water to the detriment of adjoining crops or vegetation and

depleting biodiversity. A series of experiments established that this exotic tree releases secondary metabolites known as allelochemicals into the environment that affected the adjoining vegetation, and how such interactions resulted in the competitive exclusion of other plants. He discussed the possibility of using such natural chemicals in weed management. M. Rajeevan (Ministry of Earth Sciences, New Delhi) elaborated on a new drought indicator, the standardized precipitation–evapotranspiration index recently proposed to quantify the drought condition over a given area. Using this model a trend in increasing drought conditions has been reported, which is attributed to increasing global surface temperatures.

Abhishek Dey (Indian Association for the Cultivation of Science, Kolkata) looked upon hydrogen as an environment-friendly and sustainable energy vector – an alternative to fossil fuel. But due to the costs involved, production of hydrogen was limited and much focus was on its storage. Dey threw light on his group's effort in producing cost-efficient hydrogen using cheap electro-catalysts such as Co and Fe.

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## Recent advances in electron microscopy

The 33rd meeting of the Electron Microscopy Society of India (EMSI) held at the Indian Institute of Science, Bangalore during 2–4 July 2012 laid stress on recent advances in electron microscopy and its importance in various disciplines such as materials science, biology, medicine, metallurgy, etc. The keynote address by Gustaaf Van Tendello (University of Antwerp, Belgium) on the use of electron microscopy in the 21st century emphasized the important role of microscopy in today's world. C. Barry Carter (University of Connecticut, USA) spoke on interfaces between biological materials and metal or ceramic materials, which has become a critical issue today in health sciences. Among various invited lectures, Partha Goshal (Defence Metallurgical Research Laboratory, Hyderabad) dealt with carbon nanotubes

and nanofibres present in novel combinations with mechanical and electrical properties. Amar N. Ghosh (National Institute of Cholera and Enteric Diseases, Kolkata) talked about the pore-forming toxin of *Vibrio cholerae* and the study of the differences in observed hemolytic activity. Industry lectures delivered by the participants included topics ranging from helium ion microscopy, *in situ* 4D microscopy, atom probe tomography, energy filtering in transmission, etc. The contributions of the Society were highlighted in the general body meeting on day three, following the poster presentation. On the whole, the meeting recognized the efforts of scientists working in the field of electron microscopy and provided a platform to showcase their work to a multidisciplinary audience.

## Young protectors of nature

The Student Conference on Conservation Sciences (SCCS) held at the Indian Institute of Science, Bangalore during 2–4 August 2012 brought together young researchers in conservation sciences to facilitate interaction, help them develop their research ideas and methods, build contacts and capacity. As a sister conference to SCCS-Cambridge and SCCS-New York, the Bangalore event focused on attracting fellow conservation students and conservation professionals from around the world primarily from countries in South and Southeast Asia and Africa. The three-day event presented a variety of lectures ranging from biodiversity, human–animal conflict, tourism in biodiversity areas, marine biodiversity, etc. Workshops were organized on divergent topics such as the craft of compelling communication with Geoff Hyde (National Centre for Biological Sciences, Bangalore), communicating science to the general public with David Quammen (travel writer) and conservation photography with Kalyan Varma. Mahesh Rangarajan (Nehru Memorial Museum and Library) delivered the first Ravishankaran memorial lecture. He spoke about democracy and its relation to the conservation process. Quammen gave a plenary lecture on the infections, transmissible diseases caused by AIDS, SARS, rabies, etc. responsible for dramatic epidemics. Bittu Sahgal (environmental

activist and writer) showed slides of his magazine *Santury Asia* and urged the youth to be curious and courageous to save mother nature. Overall, the conference encompassed discussions on conservation in various disciplines of biodiversity. Several awards were presented for posters and talks.

## Biodiversity Asia 2012

The Second Asian Regional Conference of the Society of the Conservation Biology – Asia (SCB-Asia) section was held at J. N. Tata Auditorium in Bangalore during 7–10 August 2012. The conference was co-organized by the SCB-Asia sections, Ashoka Trust for Research in Ecology and the Environment and IISc. The conference emphasized on reversing the biodiversity decline in the world. Biodiversity Asia 2012 highlighted the advances in research and conservation of Asia's rich biodiversity. The conference included poster sessions, plenary lectures, workshops and public lectures by students and leading scientists working in the field of biodiversity. Each day ended with a public talk to make the conservation message reach a wider public.

Conference themes included conservation governance, conservation biology, conservation management and policy making in biodiversity, freshwater systems, evolutionary biology and genetics. Among various plenary sessions, Mahesh Rangarajan spoke on nature, nation and science in times of change; Madhav Gadgil discussed about improving the governance of environment in India and Uma Ramakrishnan (National Centre for Biological Sciences, Bangalore) spoke about assessing population connectivity for mammalian carnivores using landscape genetics, etc. In addition, various workshops were organized on topics such as understanding the impact of illegal animal trade in Asia on wildlife conservation, conservation genetics, Bayesian models in conservation science, etc. An award ceremony marked the end of the conference.

## Home-coming event

The field of Raman spectroscopy is the result of the work of C. V. Raman, based on his discovery of the Raman effect for

which he received the Nobel Prize in 1928. Once in two years, an International Conference on Raman Spectroscopy is organized in different venues worldwide. The last time in India it was organized in 1978. The event of 2012 known as the 'Home-coming event', was held in Bangalore, during 12–17 August 2012. The conference brought together over 350 leading international Raman spectroscopists from 46 countries. C. N. R. Rao in his inaugural address emphasized the importance of the Raman effect in the recent past and recalled his first meeting with Raman. He added that Raman greatly encouraged large numbers of students through his lectures and that Raman was an 'architect of science in India'. The opening plenary lecture by Robin Clark (University College, London) focused on the contributions of four scientists – Rayleigh, Ramsay, Rutherford and Raman. This was followed by a plenary lecture by Hiro-o Hamaguchi (University of Tokyo) on the landmarks of Raman spectroscopy and its importance in scientific research. Various topics covered in the event included resonance Raman spectroscopy, biological and biomedical applications, nanomaterials, graphene and solid state, forensic art, archeological detection of materials, terrestrial and planetary applications, surface-enhanced Raman spectroscopy, coherent Raman microscopy, instrumentation techniques and new developments, X-ray Raman, theoretical development and computation and Raman optical activity. An exhibition of books and journals, including 'C. V. Raman – A Pictorial Biography' was displayed by the Indian Academy of Sciences, which was founded by Raman. Besides this, the life and science of Raman were highlighted through various posters.

Hardik Panchal

## Sarabhai Research Awards and PRL Award

Five scientists from around the country were awarded the Hari Om Ashram Pre-rit Dr Vikram Sarabhai Research Awards and PRL Awards for the year 2012. Each award carries a medal and a cash prize of Rs 50,000

The recipients of the Vikram Sarabhai Research Awards in different fields are

as follows: Space Science: **Tarun Souradeep** (Inter University Centre for Astronomy and Astrophysics, Pune) for his contributions in the field of observational cosmology by developing new analytical approaches for studying anisotropy in cosmic microwave background data obtained by the Wilkinson Microwave Anisotropy Probe and the recent Planck mission. The award under the Space Science category was shared by **Biswajit Paul** (Raman Research Institute, Bangalore) for his contributions to our understanding of X-ray sources based on studies of their spectral characteristics and development of new generation X-ray experiments to be flown in ASTROSAT and future Indian space missions. Space Application: **N. R. Patel** (Indian Institute of Remote Sensing, Dehradun) for his contributions in the field of agro-meteorology and in particular for retrieving of crop biophysical parameters using remote sensing data to quantify primary production. Electronics, Informatics, Telematics and Automation: **Ashwin Gumaste** (Indian Institute of Technology, Mumbai) for introducing novel concepts of light trail and omnipresent Ethernet and effective transfer of technology to industry. The recipient of the PRL Award was **Vineet K. Gahalaut** (National Geophysical Research Institute, Hyderabad) for his outstanding work using GPS system to understand the processes of crustal deformation and occurrence of earthquakes.

## NASI Awards

The National Academy of Sciences, India has announced the winners of its NASI-Young Scientist Platinum Jubilee Awards for 2012. Each award carries a citation, a bronze medal and Rs 25,000 in cash as a recognition to promise, creativity and excellence in young scientists. The award is given to recognize the notable contributions made by researchers in any branch of science and technology on the basis of their work carried out in India. The award is given to scientists below 35 years.

The recipients of the awards are as follows. Computer Science and Engineering: Ansuman Banerjee (Indian Statistical Institute, Kolkata), V. Seena (Indian Institute of Technology (IIT), Rajasthan); Chemical Sciences: Sujit Kumar Ghosh (Indian Institute of Science Education