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From the President's Desk



The year 2011 turned out to be a year of hectic activity for chemists around the world. The CRSI on its part celebrated the International year of Chemistry by arranging several activities at different places across the country including four zonal meetings to promote chemical research and chemical education. Four successful zonal meetings were held in Pune, Siliguri, Jammu and Pondicherry and I would like to take this opportunity to thank the local organizers for having done a wonderful job. Following the tradition set up by the Society, we had a well-attended, scientifically stimulating and interactive 14th CRSI National Symposium (NSC-14) in Trivandrum organized jointly by the National Institute for Interdisciplinary Science and Technology (NIIST) and the Indian Institute of Science Education and Research (IISER), Trivandrum, during February 3-5, 2012.

The 6th CRSI-RSC joint symposium was held on February 2, 2012. These two meetings were convened by D. Ramaiah (NIIST). We sincerely appreciate the efforts put in by our hosts led by Dr. Suresh Das, Dr. D. Ramaiah and Professor E.D. Jemmis for the success of the symposium.

This year the mid-year meeting of CRSI was organized at the Central Drug Research Institute, Lucknow during July 21-22, 2012 by Dr. T.K. Chakraborty and Dr. Sanjay Batra. We had active participation of around 200 CRSI members in this meeting and I thank the organizers for putting up a great show.

The 7th CRSI-RSC joint symposium and 15th NSC will be held in the campus of Banaras Hindu University, Varanasi during January 31, 2013 and February 1-3, 2013, respectively. Our sincere thanks to all the colleagues in BHU for their ready cooperation to organize this annual event. I eagerly look forward to a larger participation from all of you.

The CRSI continues its interaction with the Royal Society of Chemistry (RSC) as evidenced from the six successful joint symposia held in Delhi, Bangalore, Pune, Hyderabad, Bhubaneswar and Trivandrum. At the invitation of RSC, a joint symposium on Molecular Materials was arranged in London (September 10-11, 2012) and in Glasgow (September 13). This was the first joint symposium organized in the UK by RSC. On behalf of CRSI, I thank the RSC for the excellent arrangements and wonderful hospitality.

In the last few years the Society has grown in size with increased participation of members in all the activities. I am happy to see that we are able to provide a platform for beneficial interaction within the chemistry community and are able to meet the needs of our profession. I seek your suggestions and views to improve our Society's interaction with the academic community and the chemical industry.

Thanking you,

With best wishes,

S. Chandrasekaran

Announcements:

The 15th CRSI National Symposium in Chemistry and 7th CRSI-RSC Symposium

The 15th National Symposium in Chemistry (NSC-15) will be organized at Banaras Hindu University (BHU), Varanasi, during February 1-3, 2013. The 7th CRSI-RSC joint symposium will be held on January 1, 2013. These two meetings will be convened by Dayashankar Pandey. The next General Body Meeting will be held at BHU on February 2, 2012. Members may contact the convener (Email: dsprewa@yahoo.com) for further information.

The next mid-year meeting of CRSI will be held at National Institute of Technology (NIT), Surathkal in July 2013 and this meeting will be convened by Arun M. Isloor.

Highlights of the 14th CRSI National Symposium in Chemistry (NSC-14)

The 14th National Symposium in Chemistry (NSC-14) was organized jointly by the National Institute for Interdisciplinary Science and Technology (NIIST) and Indian Institute of Science Education and Research (IISER), Trivandrum, during February 3-5, 2012. The purpose of this symposium was to provide a forum for the scientists, teachers and students in the country to participate and discuss the recent development in chemistry. The symposium was very well attended by more than 700 registered participants. The symposium was inaugurated with the welcome addresses by S. Chandrasekaran, President, CRSI, Suresh Das, Director, NIIST and E. D. Jemmis, Director, IISER, Trivandrum followed by remarks from G. Mugesh, Secretary General, CRSI. The importance of Chemistry in life and in the sustainable development was strongly emphasized by all the dignitaries. In the end of inaugural session, D. Ramaiah, Convener, NSC-14, proposed vote of thanks.



Inauguration of 14th CRSI Symposium (NSC-14) at NIIST, Trivandrum

The symposium comprised of various special, medal and award lectures, a mini theme symposium and two poster sessions. The first session started with the C. N. R. Rao Award Lecture by Reshef Tenne, Weizmann Institute of Science. He presented an update on inorganic nanotubes and fullerene-like nanoparticles. This was followed by C. N. R. Rao National Prize in Chemical Sciences lecture

by A. K. Tyagi, Bhabha Atomic Research Centre, who talked about new functional materials with a particular emphasis on interplay of synthesis and crystallography. This was followed by two CRSI Medal lectures by M. A. Subramanian, Oregon State University and K. Kalyanasundaram, EPFL. While Subramanian discussed about discovery of novel functional metal oxides and their unusual properties, Kalyanasundaram highlighted the importance of dye-sensitized solar cells for the direct conversion of sunlight to electricity.



NSC-14: K. Bhattacharyya, Reshef Tenne and S. Chandrasekaran

The first poster session was held after lunch and ~130 students presented their posters in all areas of chemistry. After the poster session, Susumu Kitagawa (CRSI Honorary Fellow, Kyoto University) discussed about the recent developments in the area of porous coordination polymers (PCPs) and metal-organic frameworks (MOFs) as new functional microporous materials. This was followed by a lecture by Daniel G. Nocera, (CRSI Honorary Fellow, Massachusetts Institute of Technology). He discussed about his recent discovery of an "Artificial Leaf" that mimics the direct solar fuels process of photosynthesis. The silver medal lecture by Uday Maitra of Indian Institute of Science, Bangalore highlighted the research activities in his group, which involves development of luminescent, functional hydrogels by the self-assembly of multiple components.

In the special evening lecture, C.N.R. Rao talked about the research activities in the areas of solid state and materials chemistry. In his lecture entitled "Large Oaks from Little Acorns: Birth and Growth of Solid State and Materials Chemistry", he gave a passionate account of the



NSC-14: C. N. R. Rao and A. Chakravorty

developments of this new subject. He described how he ventured into new areas and created fascinating molecules and materials such as high temperature superconductors, fullerenes, magneto-resistance materials, nanotubes, inorganic-organic hybrids, etc. He ended his lecture with his most recent work on graphene.



NSC-14: Mohiniyattam (a classical dance from Kerala)

The second day of the symposium started with A. Chakravorty Endowment Lecture, which was delivered by Franc Meyer, Georg-August-Universität, Göttingen. In his lecture, Meyer talked about the application of coordination chemistry in biomimetic metallosites and bioinspired catalysts. He also discussed about metal ion cooperativity in metalloproteins and synthetic models. In the next medal lecture, Ayusman Sen, The Pennsylvania State University, described his research efforts to design nano/micromotors that can harness the chemical energy to move autonomously. These "microbots" can be directed by information in the form of chemical and light gradients. The next silver medal lecture was delivered by H. B. Singh of the Indian Institute of Technology, Bombay, on the role of intramolecular secondary interactions in organochalcogen and mercury chemistry. He presented the synthesis and reactivity of various organochalcogen and mercury compounds.



NSC-14: Poster session

In the silver medal lecture, T. Mukherjee of the Bhabha Atomic Research Centre, Mumbai provided an outlook on the mechanistic studies involving natural and synthetic antioxidants. This was followed by a medal lecture by V. R. Pedireddi of the Indian Institute of Technology, Bhubaneswar, on supramolecular assemblies of

symmetrically substituted cyclic compounds. M. Ravikant of the Indian Institute of Technology, Bombay, described his group's contributions to the development of novel fluorescent boron-dipyrromethenes. In the next lecture, P. Dastidar of Indian Association for the Cultivation of Science, Kolkata talked about shape-persistent self-healing gels derived from simple organic salts. Taking inspirations from metalloenzyme active sites, J. K. Bera of Indian Institute of Technology, Kanpur elaborated on strategies to design bifunctional catalysts for practical applications. This was followed by the second poster session, where ~140 students presented their posters.

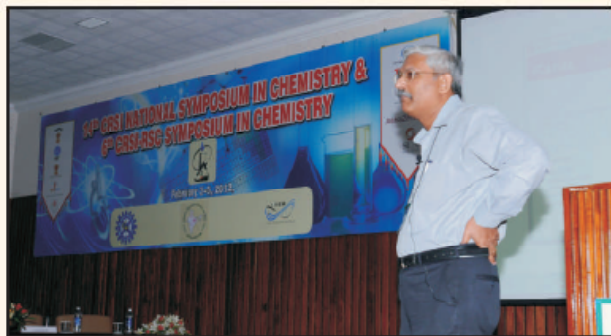


14th National Symposium in Chemistry, IISc, Trivandrum

The next session of the symposium began with a special mini symposium on "Functional Organic Materials: From Molecules to Devices". Presentations of four outstanding chemists added additional spirit to this CRSI meeting. In the first lecture of this theme symposium, K. N. Ganesh of IISER, Pune deliberated on the development of nano-DNA as both generic and genetic materials, with applications ranging from biological materials in diagnostics, drug delivery and cell culture. In the next lecture, S. Bhattacharya of IISc, Bangalore discussed about the applications of various biomaterials and how one can design them. Y. N. Mohapatra of Indian Institute of Technology, Kanpur talked on the development, characterization and applications of electronic and optoelectronic materials, particularly in inorganic and organic semiconductors. He also discussed about the optoelectronic properties of polymers and organic semiconductors to understand their suitability for display, photovoltaic and large area electronic applications. In the



NSC-14: S. K. Ghosh and Teizo Kitagawa (Mizushima-Raman lecture)



NSC-14: Silver Medal Lecture by T. P. Radhakrishnan

last lecture of mini symposium, A. Ajayaghosh of NIIST, Trivandrum summarized some of the latest developments in the area of fluorescent molecules and assemblies and their applications as diagnostics.

The third day of the symposium started with the Mizhushima-Raman lecture by Teizo Kitagawa of Toyota Physical and Chemical Research Institute, Japan on the use of resonance Raman spectroscopy to understand the picobiological features in functions of heme proteins. This was followed by a medal lecture by A. Dandia of University of Rajasthan on diversity-oriented organic transformations. In another medal lecture, H. N. Ghosh of Bhabha Atomic Research Centre, Mumbai, discussed about the application of femto-second dynamics in understanding the interfacial electron transfer dynamics in dye-sensitized and quantum dot solar cell material. M. Swaminathan of Annamalai University, Annamalaiagar described his recent research activities on modified semiconductor oxides in environmental remediation and organic synthesis.

The next session started with a silver medal lecture by T. P. Radhakrishnan of the University of Hyderabad. He described various methods for the fabrication of thin films, nanostructures and nanocomposites and the development of new materials and modes of application through chemistry within a polymer thin film. In the next medal lecture, Pradyut Ghosh of the Indian Association for the Cultivation of Science, Kolkata highlighted the use of simple receptors for the recognition and extraction of anions and ion-pairs. He showed how tripodal amine receptors and pseudorotaxanes can be used for anion binding. In the next medal lecture, B. M. Bhanage of the Institute of Chemical Technology, Mumbai elaborated on the development of catalysts for small molecules and strategies for catalyst product separation and recycle. K. K. Ghosh of Pt. Ravishankar Shukla University, Raipur discussed different types of organophosphorus toxicants and the kinetics of detoxification and reactivation pathways.

As in the previous year, a special session dedicated to Chemical Education was held on February 5, 2012. This programme is envisaged toward the popularization of

chemistry. Six teachers, G. Chandramohan (A.V.V.M. Sri Pushpam College, Thanjavur), Lisa Sreejith (NIT Calicut), Amiya Kumar Panda (University of North Bengal, Darjeeling), Subhajit Dinda (Dasaratha Deb Memorial College, Tripura), Mariappan Murali (National College, Tiruchirappalli), Shivani Gulati (DAV College, Chandigarh), were bestowed with the 'Best Teacher Award' by CRSI towards appreciation and encouragement of pursuing chemistry. The teachers shared the experience of teaching and made suggestions for the improvement of teaching at school and college levels.



NSC-14: Presentation of Best Teacher Awards

Highlights of the 6th CRSI-RSC Joint Symposium

The 6th CRSI-RSC joint symposium in chemistry was held on February 2, 2012. The symposium was inaugurated with the welcome address by S. Chandrasekaran, President CRSI and Robert Parker, CEO, RSC. S. Chandrasekaran and Robert Parker highlighted that the symposium is expected to foster collaboration between the UK and Indian scientists and benefit students from both the countries. The first lecture was delivered by Anna Peacock, University of Birmingham, UK. She highlighted the importance of metallopeptides and her group research activities in the development of novel metallopeptides with potential therapeutic applications. Satish Patil from Indian Institute of Science, Bangalore presented rational design of conjugated polymers and its applications in organic solar cells. The first session ended with the short lecture by Geoffery Cooper, University of Glasgow, UK.



6th CRSI-RSC Participants at NIIST, Trivandrum

In the second session, Jacob Ogweno Midiwo, University of Nairobi, Kenya highlighted the importance of anti-oxidant compounds extracted from Kenyan medicinal plants. Suhrit Ghosh, Indian Association for the Cultivation of Science, Kolkata discussed the hydrogen-bonding mediated supramolecular self-assembly of donor and acceptor conjugated chromophores. The session ended with a short lecture by Geetharani K., a Ph.D. student from Indian Institute of Technology, Madras.



Robert Parker & S. Chandrasekaran (MOU between CRSI and RSC)

The post-lunch session began with the invited lecture by G. Sekar, Indian Institute of Technology, Madras. He highlighted the ongoing research activities in his group toward chiral catalysts for the synthesis of enantiomerically enriched alcohols. His lecture was followed by three short lectures. These lectures were given by Ph.D. students (Debjani Si, IIT Bombay; Biswajit Saha, IIT Kanpur; Dibyendu Sasmal, IACS, Kolkata) and they presented their ongoing research projects.



6th CRSI-RSC Symposium: Student Presentation

The last session of the symposium began with the lecture by Bob Crawford, Unilever R&D Port Sunlight, UK. He highlighted the significance of collaborative work by giving example of renewable ingredients for formulated consumer products. The session ended with a short lecture by Soham Mukherjee, a Ph.D. student from Indian Institute of Science, Bangalore. The symposium ended with the closing remarks by Robert Parker and S. Chandrasekaran.

International Year of Chemistry (IYC) Activities in 2011

CRSI organized year-long activities at all levels during 2011 to celebrate the International Year of Chemistry (IYC). The

activities were formally initiated at Bangalore on January 1, 2011. The program started with the release of a monograph titled "Chemistry Today", followed by an exciting lecture by C. N. R. Rao on the historical development of chemistry over the past two centuries. This was followed by a lecture-cum-practical demonstration by U. Maitra to a large number of high school students. An Editorial by P. Balaram highlighting the inaugural event can be found in the first issue of Current Science, Vol. 100, 2011. During the annual CRSI meeting on February 4, 2011 at Bhubaneswar a special IYC-2011 session was held. Four zonal meetings of the CRSI during 2011 had special sessions dedicated to the IYC activities. The twelve regional/local chapters of the CRSI also celebrated IYC-2011 during the year.



IYC Activities: Release of monograph "Chemistry Today"

As part of the IYC activities, the National Chemical Laboratory (NCL), Indian Institute of Science Education and Research (IISER) and University of Pune, Pune, organized the first zonal meeting, during May 13-14, 2011. The meeting was held at National Chemical Laboratory, Pune. During the inauguration, Sourav Pal, Director, NCL, K. N. Ganesh, Director, IISER, S. Chandrasekaran, President of CRSI, V. Krishnan and A. Chakravorty, past Presidents of CRSI, and G. Mugesh, Secretary General, CRSI have made their remarks.



Inauguration of the First Zonal Meeting at NCL, Pune

There were four Special Lectures (Charusita Chakravarty, IIT Delhi; Subrata Ghosh, IACS Kolkata; Shyamalava Mazumdar, TIFR Mumbai; K. Vijayamohan, NCL Pune and CECRI Chennai), 3 Bronze Medal Lectures (Haridas Pal,

BARC Mumbai; B. R. Srinivasan, Goa University; Biswajit Ganguly, CSMCRI, Bhavnagar) twelve Invited Lectures (Sandeep Kumar, Raman Research Institute; Prasenjit



First Zonal Meet at NCL, Pune

Ghosh, IIT Bombay; S. Hotha, IISER Pune; S. K. Haram, University of Pune; V. K. Shahi, CSMCRI Bhavnagar; B. P. Bandgar, Solapur University; S. D. Choudhury, BARC Mumbai; B. M. Banage, ICT Mumbai; S. K. Asha, NCL Pune; V. K. Jain, Gujarat University Ahmedabad; D. H. Dagade, Shivaji University Kolhapur; S. Tilve, Goa University) and four Mini Symposium Lectures (Sandeep Verma, IIT Kanpur; Vaijayanti Kumar, NCL Pune; Mrinalini Puranik, NCBS, Bangalore; G. J. Sanjayan, NCL Pune) on the theme: Bio-inspired Chemistry. A chemical education programme was organized at the end of the technical sessions, which began with a remark by S. Chandrasekaran, President of CRSI. S. P. Kamat, Goa University, Goa and D. V. Prabhu, Wilson College, Mumbai, talked about the need for a change in teaching and evaluation methodology, and innovative chemistry teaching. The meeting also included 134 posters presentation, from which 6 posters were selected for the poster awards.



Inauguration of the Second Zonal Meeting at NBU, Siliguri

The second zonal meeting was organized successfully by the Department of Chemistry, University of North Bengal during July 22-24, 2011. The meeting was convened by Prof. B. Basu, Department of Chemistry, NBU. More than one hundred participants from different parts of India participated in the meeting with more participation from the North Eastern region. The meeting comprised of four Special Lectures (Vijay Nair, NIIST Trivandrum; A. Ramanan,

IIT, Delhi; Sujit Roy, IIT, Bhubaneswar; S. Umapathy, IISc, Bangalore), 2 Bronze Medal Lectures (Prasanta K. Das IACS, Kolkata; Chaitali Mukhopadhyay, Calcutta University) ten Invited Lectures (C.R. Raj, IIT, Kharagpur; Pankaj Das, Dibrugarh University; T.K. Paine, IACS, Kolkata; Dipak K. Dutta, NEIST, Jorhat; A. Misra, NBU; O. Mukherjee Singh, Manipur University; Pradeep Phukan, Gauhati University; N. Chattopadhyay, Jadavpur University; T.S. Basu Baul, NEHU, Shillong; Swagata Dasgupta, IIT, Kharagpur) and



Second Zonal Meet: S. Pal and S. Umapathy

three Mini Symposium Lectures (Swati De, Kalyani University; S. K. Saha, NBU; Nilmoni Sarkar, IIT, Kharagpur) on the theme: Chemistry of Soft Matters. U. Maitra made a demonstration on "Chemistry is Fun", where more than 150 school students were present. Besides, an encouraging lecture was delivered by A. Chakravorty on the occasion of 150th birth anniversary of Acharya P. C. Ray. During the meeting, around thirty research scholars/teachers presented posters on their recent work. Finally, seven teachers from schools and colleges in the Eastern and North Eastern were given the "Best Teacher" Award for their dedication and contribution to make chemistry an interesting subject and also to motivate students in the field of chemical science.



Zonal Meet: Vijay Nair and Prasanta K. Das

The Department of Chemistry, Jammu University and the Indian Institute of Integrative Medicine (IIIM), Jammu, jointly organized the third zonal meeting during September 22-24, 2011. The Chief guest of the opening ceremony, Varun Sahni, Vice-Chancellor of Jammu University, stressed upon the need for strengthening

chemistry teaching at the undergraduate and secondary school levels, as chemistry provides solution to challenges of, for example, environmentally benign manufacturing. Meena Sharma and Kamal Kapoor were the Convener and organizing Secretary of the meeting. Rajeeve Gupta, Dean, Faculty of Science and S. C. Taneja, IIIM, also welcomed the delegates to the meeting.



Participants of Third Zonal Meet in Jammu

There were three Special Lectures (S. Sampath, IISc, Bangalore; Rakesh K. Mahajan, GNDU, Amritsar; S. Ramakrishnan, IISc, Bangalore), two Bronze Medal lectures (Sanjay Batra, CDRI Lucknow; Manoj Kumar, GNDU Amritsar) and ten Invited Lectures (A. K. Verma, University of Delhi; G. R. Chaudhary, Punjab University; Sushil Pandey, University of Jammu; Arun Sinha, IHBT, Palampur; P. Jeevanandhan, IIT Roorkee; N. G. Ramesh, IIT Delhi; Parthasarathi Das, IIIM Jammu; Anbu Kulanthainathan, CECRI; Vibha Tandon, Delhi University; Parameswar K. Iyer, IIT Guwahati). A mini-symposium on cheminformatics was held, with speakers: Frank Hollinger, Sphaera Pharma; R. Raghu, Schrodinger Inc. and P. V. Bharatam, NIPER Mohali. In the chemical education programme, S. Chandrasekaran, President of CRSI, made introductory remarks, which was followed by a lecture by A. K. Bakshi, Vice-Chancellor, UPRTU University, Allahabad, on role, growth and challenges to chemistry education and integrated chemistry teaching. This session was chaired by R. N. K. Bamezai, Vice-Chancellor, SMVD University, Katara. There was a poster session, with 74 posters presentations, from which 6 posters were selected for the poster awards.



Chemical Education: Third Zonal Meet in Jammu

The fourth zonal meeting was organized by H. S. P. Rao at Pondicherry University during December 16-17, 2011. Inaugural remarks were made by H. S. P. Rao, Convener, S. Chandrasekaran, CRSI President and G. Mugesh, CRSI Secretary General. The meeting comprised of three Special Lectures (M. Periasamy, University of Hyderabad; A. G. Samuelson, IISc, Bangalore; M. Vairamani, SRM University, Chennai); three Bronze Medal lectures (R. Raghunathan, University of Madras; A. Sundaresan, JNCASR, Bangalore; G. Mugesh, IISc, Bangalore) and nine Invited Lectures (K. Mangala Sunder, IIT Madras; Bala. Manimaran, Pondicherry University; A. Patnaik, IIT Madras; Diwan S Rawat, University of Delhi; A. K. Mohanakrishnan, University of Madras; Velmathi, NIT Trichy; D. Srinivas Reddy, NCL, Pune; R. Nagarajan, University of Hyderabad; N. Dastagiri Reddy, Pondicherry University).



Inauguration of the Fourth Zonal Meeting at Pondicherry University

In a mini-symposium on medicinal chemistry, Manoranjan Panda (AstraZenca, Bangalore), S. Pahlada Rao (CJEX Biochem, Bangalore), C. V. Srinivasan (Orchid Pharma, Chennai), and N. Selvakumar (DSK InnoSciences Pvt. Ltd. Hosur) discussed about the recent developments in the area of medicinal chemistry and drug design. In a Special Evening Lecture, S. Chandrasekaran, CRSI President, spoke about Green Chemistry. A chemical education programme was held on the second day of the meeting with a live demonstration on "Colors and Chemistry" by A. G. Samuelson, IISc, Bangalore. Best teacher awards were presented to Shivkumar D. Danai (Dr. R. M. L. Ind. PU College, Gulbarga), Padmakumar Koolanghat



Chemical Education Program at the Fourth Zonal Meet

(Government Victoria College, Pallakad), Tata Kondala Rao (Govt. Degree & PG College, Srikakulam), D. Santi Kumar (Dr. S. R. K. Govt. Arts College, Yanam), G. Muthuramalingam, (G. G. V. Higher Secondary School, T. Kallupatti) and S. Vasantha (Lady Doak College, Madurai).

Minutes of the General Body Meeting held in Trivandrum on February 4, 2012

The Secretary N. Jayaraman formally welcomed all the members to the 14th NSC general body meeting. He placed on record very sincere thanks to Suresh Das, Director, NIIST, Trivandrum and E.D. Jemmis, Director, IISER, Trivandrum, and their team for organizing the 14th CRSI Annual meeting in Trivandrum this year. The President S. Chandrasekaran formally welcomed the members and thanked them for taking time and effort to attend the meeting. He expressed his deep appreciation for the excellent arrangements made by the local organizers for this year's annual meeting and the symposium. This was followed by the confirmation of the minutes of the previous general body meetings held in Siliguri.



14th National Symposium in Chemistry, NIIST, Trivandrum

In his opening remarks, the President first placed on record his appreciation and thanks for the grand organization of the 13th CRSI National Symposium in Chemistry in Bhubaneswar, under the Chairmanship of T.K. Chandrashekar. The President mentioned about the change in the venues of 14th CRSI National Symposium in Chemistry initially from Mysore University and later from Gujarat University necessitated due to some practical difficulties. Suresh Das, Director, NIIST, Trivandrum, and E.D. Jemmis, IISER, Trivandrum, were approached with the request to arrange the meeting in Trivandrum. The suggestion was immediately agreed upon to by both of them. The President expressed sincere appreciation to both of them and the team for having undertaken the organization of the CRSI Symposium at NIIST.

The President elaborated about the four zonal meetings conducted during the International Year of Chemistry (IYC) -2011. The zonal meetings, including the chemical education programmes, held in Pune, Siliguri, Jammu and

Pondicherry, were extremely successful. The President also informed about his visit to Cambridge to attend the meeting with the President of the Royal Society of Chemistry (RSC) and Council members of the RSC. This meeting was also attended by the Presidents of the Korean and the Brazilian Chemical Societies. He informed that the meeting was very useful and it provided a good opportunity to interact with the office bearers of the RSC.

The President then talked about the 6th CRSI - RSC joint symposium that was held on February 2, 2012 at NIIST, Trivandrum, a day prior to the 14th CRSI National Symposium in Chemistry. With the previous 5-year period of MOU of CRSI with RSC elapsed on February 1, 2012, and upon favorable opinion of Council members about the continuation of RSC-CRSI interaction, an MOU was signed formally by Robert Parker, CEO, RSC and the CRSI President on February 2, 2012, for the next five year period. The President informed about the possibility of having a joint CRSI - RSC meeting in UK during 2012 for 2 days. The theme of the symposium should be of general interest to CRSI/RSC.

The award of CRSI medals to honor distinguished chemists of Indian origin was initiated three years ago. Based on the nominations received for the year 2013 and the recommendation of the Council, the President proposed the names of the following three chemists to receive the medals in recognition of their outstanding contributions to the chosen areas of chemistry: (i) A. R. Ravishankara, Univ. of Colorado, USA; (ii) Suresh Bhargava, RMIT, Australia and (iii) T.V. Rajan Babu, Ohio State Univ, USA. The members of the Society endorsed the same.

CRSI Honorary Fellows for the year 2013 was discussed. Based on the proposals received, the President proposed the names of: (i) E.W. Meijer, The Netherlands; (ii) T. Aida, Japan and (iii) F. Crim, USA, for their pioneering contributions to the chosen areas of chemistry. The members of the Society endorsed the same.

The formation of new CRSI local chapters was also discussed and the following new local chapters were approved: Delhi; Ahmedabad; Kolkata region (outside Kolkata in addition to the existing one); Pune; Bhubaneswar; Jaipur and Mumbai. Proposals from Madhya Pradesh and Jammu will be taken up in future.

The Secretary General, G. Mugesh informed the General Body of the new initiatives of CRSI and about the increase in the membership of the Society. He informed the members about the release of the new CRSI Members' Directory and familiarized the members with the new website of the Society. He briefed the members about the meeting in Bangkok conducted by Wiley-VCH and the Asian Chemical Editorial Society (ACES) and the discussion

about the new journal "Asian Journal of Organic Chemistry". The President informed that all the other Asian Chemical Societies were in favor of starting the journal, whereas CRSI abstained as the new journal does not cover all areas of chemistry.

A formal request from D.S. Pandey, Banaras Hindu University (BHU), to conduct the Annual meeting and the 15th CRSI National Symposium in Chemistry, was considered and the members agreed to the same. The 7th CRSI-RSC meeting will be held on January 31, 2013 and the 15th CRSI National Symposium in Chemistry (NSC-15) during February 1-3, 2013 at BHU, Varanasi. The President informed that the mid-year meeting of the Society will be held at CDRI, Lucknow, during July 21 and 22, 2012, under the convenership of Tushar Chakraborty. A proposal from Arun M. Isloor, NIT Surathkal, to conduct the 2013 mid-year meeting was considered and the proposal was also approved. The President welcomed suggestions regarding the venue for the 2014 Annual meeting of the Society.

The President mentioned about the lack of participation of scientists from industry in the CRSI meetings and suggested that local chapters and industries in the vicinity of local chapters could help to improve the interactions. A member suggested that there can be an industrial award to recognize the contribution from the industries; the President noted that this should be possible. A member queried whether CRSI could be part of framing a national curriculum for high school chemistry. The President indicated that while it is possible in principle, it would be difficult to implement it with our limited resources. A member suggested that it would be better to have initiatives similar to IYC and Outreach programmes to attract the interest of youngsters. The general body meeting ended with a vote of thanks.

Eighth Asian Chemical Editorial Society (ACES) Meeting

CRSI is part of the Asian Chemical Editorial Society (ACES), a unique association of major chemical societies throughout Asia and the Pacific. The society, in



**Participants of 8th ACES meeting in Weinheim, Germany
(Inset: latest covers of CAJ and AsianJOC)**

collaboration with Wiley-VCH, aims to publish top-quality chemistry journals with an international readership. ACES was founded in 2005 and, at the moment, it publishes two major journals in chemistry: Chemistry—An Asian Journal (CAJ), Asian Journal of Organic Chemistry. All participating societies in ACES share a commitment to scientific excellence, to publishing ethics, and to the highest standards in publication.

The 8th meeting of the ACES was held on June 29, 2012 at the Wiley-VCH offices in Weinheim, Germany. This meeting was attended by representatives from the chemical societies of India, Japan, Hong Kong, Korea, Singapore, and Thailand, as well as from Wiley-VCH, including W. Koch, CEO of the Gesellschaft Deutscher Chemiker (GDCh; German Chemical Society). During the meeting, an agreement between the Federation of Asian Chemical Societies (FACS) and ACES was signed for supporting Chemistry—An Asian Journal. Another highlight was the imminent publication of the Asian Journal of Organic Chemistry (AsianJOC), the second ACES journal that covers organic chemistry in its entirety and publishes primary research and critical secondary information from authors across the world. It was decided to organize the 9th ACES meeting in Singapore on August 24, 2013, following the 15th Asian Chemical Congress (21–23 August, 2013).



Signing of Support Agreement between ACES and FACS

Highlights of the 6th Mid-Year Meeting

The 6th mid-year meeting was held at the Central Drug Research Institute (CDRI), Lucknow, during July 21–22, 2012. The symposium started with a welcome by Sanjay Batra and opening remarks by T. K. Chakraborty, Director, CDRI, S. Chandrasekaran, CRSI President and G. Mugesh, CRSI Secretary General. The first scientific session began with an invited lecture by Y. D. Vankar of IIT Kanpur on the design and synthesis of C-2 substituted glycols as glycosidase inhibitors. The second lecture by A. C. Bhasikuttan, BARC, Mumbai, highlighted various molecular recognition processes in biomolecular assemblies and their photochemical behavior. The session

ended with a lecture by K. R. Justin Thomas, IIT Roorkee, who talked about organic dyes as sensitizers for dye-sensitized solar cells.



6th Mid-year meeting at CDRI, Lucknow

In the second session, Ashok K. Mishra of IIT Madras discussed about some new approaches towards fluorescence based analysis of complex multifluorophoric systems, Maddi S. Reddy of CDRI, Lucknow talked about cycloisomerization of alkynols and alkynamines for the synthesis of various biologically and medicinally important heterocycles and Debabrata Goswami of IIT Kanpur described some novel approaches to understand the molecular motions in liquids. In the next session, T. Govindaraju of JNCASR, Bangalore described some interesting bioinspired approaches to molecular systems and materials and Atul Goel of CDRI, Lucknow, talked about new donor-acceptor small organic fluorescent molecules and their applications in biological and material sciences.

The third technical session was followed by a poster session, where a large number of students/post-docs presented their work. The next session was dedicated to a chemical education programme, which began with a remark by S. Chandrasekaran, President of CRSI. In this session, P. K. Bharadwaj, IIT Kanpur discussed about the challenges in teaching and evaluation methodology. He mentioned that effective teaching begins with effective course design, and therefore, proper course design is very important. Five teachers (A. K. S. Chauhan, Lucknow University; Naveen K. Khare, Lucknow University; Archana



Poster session: 6th Mid-year meeting at CDRI, Lucknow

Talwar, IET College; Sangeeta, Navyug Kanya Vidyalaya; Ashutosh Mishra, KV, Raebareli) were awarded the "Best Teacher" awards for their contribution to chemistry teaching.

The second day of the symposium started with a lecture by B. Jayaram, IIT Delhi, on several in Silicio approaches to understand Genomes and to identify hit molecules for drug design. Following this, B. L. V. Prasad, NCL, Pune, discussed about design strategies for the preparation of water dispersible nanoparticles and their applications. Rama Kant, University of Delhi, talked about power spectrum based theories of ubiquitous electrode roughness and their electrochemical responses. The session ended with a lecture by Biswajit Ray, Banaras Hindu University, Varanasi, who discussed the synthesis of well defined poly(N-vinylpyrrolidone)-based amphiphilic copolymers.

In the last technical session of the symposium, S. Natarajan, IISc, Bangalore, gave an interesting lecture on the use of non-conventional anions to build molecular frameworks. The second lecture in this session was delivered by Subodh Kumar, GNDU, Amritsar, who talked about the recognition of anions in highly competitive protic media. The session ended with a lecture on the applications of organometallic compounds as optical probes by D. S. Pandey, Banaras Hindu University, Varanasi.



6th Mid-year meeting: Best Poster Awards

Minutes of the General Body Meeting held at CDRI

The general body meeting was held at CDRI, Lucknow on July 21, 2012 during the 6th Mid-year symposium. The meeting began with a welcome by the Secretary General, G. Mugesh, to all the new and existing members of the Society. He thanked the local organizers, particularly T. K. Chakraborty and Sanjay Batra, for the excellent organization of the 6th CRSI mid-year meeting. The CRSI president, S. Chandrasekaran, then addressed the members and welcomed them again. This was followed by the formal confirmation of the minutes of the previous GBM.

The Secretary General then presented a brief report of the activities of the CRSI. He mentioned the successful conduct of the four zonal meetings in 2011 as part of IYC activities at Pune, Siliguri, Jammu and Pondicherry and the annual meeting in February 2012 at Trivandrum. He briefed about the CRSI-RSC cooperation and the members benefits under the RSC-CRSI partnership scheme. He also mentioned that the CRSI has participated in the 8th Asian Chemical Editorial Society (ACES) meeting on June 29, 2012 in Weinheim. The members were informed that the 15th National Symposium in Chemistry (NSC-15) and the 7th CRSI-RSC joint symposium will be held during January 31-February 3, 2013, at Banaras Hindu University, Varanasi.

The audited statement of accounts was circulated among the members and the Treasurer, Sourav Pal, made a brief presentation of the income and various expenditures for the year ended 31st March 2012. He mentioned that there was a significant increase in the expenditure in 2011 due to various CRSI-IYC activities. The audit report was accepted by the General Body.

The CRSI President then announced the names of Gold, Silver and Bronze Medal winners for the year 2013. He also announced the names of the scientists, who have been selected for the C.N.R. Rao National Prize for Chemical Research. The President, in his address, urged the members to enthusiastically participate in the activities of the society. He raised several important issues concerning the need to increase the membership, attract young members to the society and have them play an important role in advancing the cause of the chemical sciences in the country. He also mentioned that the program related to Chemical Education will be continued. The president closed the meeting by thanking all the members once again for their active participation and requested for their continued support to further enhance the activities of the CRSI.

International Workshop on Natural Product Chemistry

The first International Workshop on Natural Product Chemistry organized by the Royal Society of Chemistry



Participants of the International Workshop in China

(RSC) and National Natural Science Foundation of China was held in Beijing during September 24-26, 2012. Upon invitation, two members, Arun K Sinha, CSIR-IHBT Palampur and S. Baskaran, IIT Madras, were nominated by CRSI to attend and deliver a lecture in the meeting, along with 17 other international speakers from 10 different countries. CRSI thanks Alejandra Palermo and Chunxiao Zheng of RSC and Shi-Shan Yu and Chen Yongjun of China for extending invitation to CRSI members and for all the supports.

RSC-CRSI Meeting in UK

An RSC-CRSI meeting was held for the first time in UK in the second week of September. This started with a 2-day meeting at the RSC office in London in which ten Indian and about the same number of UK chemists participated in a conference entitled "Molecular Materials".



Participants of RSC-CRSI meeting in UK

This was followed by visits to the University College, London, and the Imperial College, London. There was also a one and a half day meeting at Strathclyde University, Glasgow in which a large number of students and postdocs participated. On the last day the Indian and the Strathclyde teams discussed possibilities of future collaboration. A short visit to the Edinburgh university was also organized on the last day. Overall, this was a very well organized event, and CRSI greatly appreciates the efforts of the RSC officials, and Rein Uljin of Strathclyde University (the UK coordinator).



Participants of RSC-CRSI meeting in UK

CRSI Honorary Fellows, 2012-13

E.W. "Bert" Meijer (Eindhoven University of Technology, The Netherlands), Takuzo Aida (The University of Tokyo, Japan) and F. Fleming Crim (University of Wisconsin-Madison, USA).

New Membership

For membership applications, please write to: G. Mugesh, Department of Inorganic & Physical Chemistry, Indian Institute of Science, Bangalore 560012, Tel: +91-80-2360-2566; Fax: +91-80-2360-2566; Email: mugesh@ipc.iisc.ernet.in or Raji Subramanyam, Email: raji.subramanyam@gmail.com or crsi@crsi.org.in. One can become a lifetime member of CRSI by paying Rs 5,000.- (Rupees Five Thousand Only) as membership fee. The payment can be made by electronic transfer or demand draft. Details can be found at the CRSI website (<http://crsi.org.in>).

The Chemical Research Society of India has been granted with effect from 26/01/99 the status of Wholly Charitable Trust (certified under section 12A(a) of the Income Tax Act of 1961).

Medals 2013

Lifetime achievement award (CRSI Gold Medal): K. K. Balasubramanian (Chennai)

CRSI Medal: A. R. Ravishankara (Boulder), Suresh Bhargava (Melbourne), T. V. Rajanbabu (Columbus)

Silver Medal: A. Ajayaghosh (Trivandrum), G. Krishnamoorthy (Mumbai), M. Palaniandavar (Tiruchirappalli)

Bronze Medal: Nitin Chattopadhyay (Kolkata), Ramesh C. Deka (Tezpur), Sundargopal Ghosh (Chennai), K. P. Kaliappan (Mumbai), Tapas K. Maji (Bangalore), Tarun K. Mandal (Kolkata), Surinder Mehta (Panjab), P. Phukan (Guwahati), B. L. V. Prasad (Pune), M. L. P. Reddy (Trivandrum), C. Retna Raj (Kharagpur), G. J. Sanjayan (Pune), Arun K. Sinha (Palampur), Sabu Thomas (Kottayam)

C. N. R. Rao National Prize for Chemical Research: Ashok K. Ganguli (Delhi), S. Chandrasekhar (Hyderabad)

Sixth Darshan Ranganathan Memorial Lecture: Swagata Dasgupta (Kharagpur)