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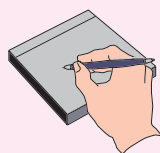
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*From the President's Desk*



I would like to extend my warm greetings to all the members of the CRSI fraternity as a sixth President of CRSI taking charge with effect from April 1, 2014. I expect that CRSI will grow further in the coming years with new activities. We want the local chapters to be



strong and active, spreading the message of chemical research and education. We want to strengthen the interaction of academia and industry. As a society, we will also like to contribute more to chemical education.

Earlier this year, we had a very successful 16th CRSI National Symposium in Chemistry (NSC-16) during February 6-8, 2014 at the Indian Institute of Technology, Bombay. The convener, Professor R. Murugavel and his colleagues at IIT Bombay made excellent arrangements and the symposium was very well attended with over 1000 participants. In the annual event, we had a number of award lectures, medal lectures, special mini-symposium. The CRSI also organized a successful CRSI-RSC symposium which had a session devoted to Chemistry Education involving teachers & students.

The mid-year symposium of CRSI was jointly organized by CSIR-North East Institute of Science and Technology (NEIST), Jorhat, and Tezpur University during July 10-12, 2014 and this provided an opportunity for many chemists from this region to participate in the activities of CRSI. This meeting was attended by a large number of enthusiastic participants, making it the most-attended CRSI Mid-year meeting. Dr. Ramaiah and his team made excellent arrangements to make the meeting a grand success.

The CRSI continues its international collaboration with Royal Society of Chemistry and Asian Chemical Editorial Society (ACES). As you are aware, the CRSI supports the chemical community in India through its co-ownership of two major chemistry journals, Chemistry-An Asian Journal and Asian Journal of Organic Chemistry. I am pleased to inform you all that the CRSI has entered into another agreement with ACES and Wiley-VCH to bring out a new journal ChemNanoMat. The new journal accepts Full Papers, Communications, and Focus Reviews in the area of nanomaterials. I am happy to invite you to submit your high-quality work to ChemNanoMat.

Before I close, I would like to remind you of the 17th CRSI National Symposium in Chemistry (NSC-17) to be held during Feb. 6-8 2015 and 9th CRSI-RSC symposium on Feb. 5 2015 at the CSIR-National Chemical Laboratory, Pune. I have the special privilege of hosting the meeting at CSIR-NCL as Director of the Laboratory. I warmly invite all of you to participate in the CRSI meeting in Pune and make it a grand success.

With best wishes,



SOURAV PAL

### The 17th CRSI National Symposium in Chemistry

The 17th National Symposium in Chemistry (NSC-17) will be organized at CSIR-National Chemical Laboratory (NCL), Pune, during February 6-8, 2015. The 9th CRSI-RSC joint symposium will be held on February 5, 2015. These two meetings will be convened by Anil Kumar. The next General Body Meeting will be held at NCL Pune on February 7, 2015. Members may contact the convener (Email: a.kumar@ncl.res.in, crsi2015@ncl.res.in) for further information. The list of speakers include: C. N. R. Rao, Toshiaki Enoki, Dieter Enders, Shankar Balasubramanian, B. M. Deb, Keiji Maruoka, Anunay Samanta, Li-Jun Wan, Sandeep Verma, P. K. Bharadwaj, B. R. Jagirdar, K. P. Kaliappan, Ram Seshadri, Amit Basak, R. B. Sunoj, D. K. Maity, M. Eswaramoorthy, Sankar P. Rath, G. Sekar, S. K. Srivastava, Subi J. George, Amiya K. Panda, Vandana Bhalla, K. R. Prabhu, , T. Punniyamurthy, D. K. Dutta, Ashwini Phukan, Srinivas Hotha, Chhanda Mukhopadhyay, S. K. Asha, Rama Kant, V. Chandrasekhar, Pradyut Ghosh, Tapan K. Paine, D. Srinivasa Reddy and P. I. Pradeepkumar.



CSIR-National Chemical Laboratory (NCL), Pune

### Highlights of the 16th CRSI National Symposium in Chemistry (NSC-16)

The 16th National Symposium in Chemistry (NSC-16) was organized at Indian Institute of Technology, Bombay (IITB), Mumbai, during February 7-9, 2014. The 8th CRSI-RSC joint symposium was held on February 6, 2014. These two meetings were convened by R. Murugavel. 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 with over 1200 registered participants and about 80% of them were young Ph.D. and Masters' students.



NSC-16 at Indian Institute of Technology, Bombay

The inaugural session started with welcome remarks by R. Murugavel, Convener of the Symposium. He mentioned that the symposium is being organized as part of the Golden Jubilee Celebrations by the Department of Chemistry, IIT Bombay and the First Golden Jubilee Lecture will be delivered by C. N. R. Rao. Devang V. Khakhar, Director, IIT Bombay, addressed the participants, highlighting the achievements of the Institute. G. Mugesh gave the welcome address on behalf of CRSI and mentioned about the rapid increase in the number of participants in the annual meetings. C. N. R. Rao, Founder-President, made special remarks on this occasion. This was followed by presidential address and scientific lecture by S. Chandrasekaran, President, CRSI. In the end of inaugural session, K. P. Kaliappan, Secretary, NSC-16, proposed vote of thanks.



Inauguration of NSC-16 at Indian Institute of Technology, Bombay

The symposium comprised of various special, medal and award lectures, a mini theme symposium and two poster sessions. The second session started with a lecture by Roeland J. M. Nolte, a CRSI honorary fellow from the Radboud University Nijmegen, The Netherlands, who talked about design and synthesis of bioinspired catalysts and materials. He discussed about his group's efforts to construct a synthetic catalytic system that binds to a synthetic polymer and moves along it a while performing a reaction, e.g. epoxidation of the polymer double bonds. The second lecture was given by Lutz F. Tietze, University of Goettingen, Germany, who is also an honorary fellow of the society. He presented an update on novel drugs and targets for a selective treatment of cancer. In particular, he discussed the application of recently developed novel galactosidic prodrugs based on the natural antibiotic duocarmycin, which are up to one million times less cytotoxic than the prodrugs in the presence of beta-D-galactosidase.



Lecture by Roeland J. M. Nolte, CRSI Honorary Fellow, at NSC-16

The C. N. R. Rao National Prize in Chemical Sciences lecture was given by H. N. Ghosh, Bhabha Atomic Research Centre, Mumbai, who discussed about ultrafast hole and electron transfer dynamics on the design of highly efficient super-sensitized quantum dot solar cells. This was followed by a bronze medal lecture by Satish Patil, Indian Institute of Science, Bangalore, who discussed his recent work on influence of torsional angle on polymer chain conformation and charge carrier mobility. The session ended with another bronze medal lecture by Prasenjit Ghosh, IIT Bombay, who talked about the practical applications of N-heterocyclic carbene and their metal complexes, particularly in the context of homogeneous catalysis and biomedical applications. The first poster session was held after lunch and ~250 students enthusiastically presented their posters on their research work in all areas of chemistry.



Poster Session at NSC-16 at IIT, Bombay

After the poster session, the third session started with the CRSI Medal Lecture by Arun K. Ghosh, Purdue University, USA. He highlighted the recent applications of organic synthesis and molecular design in medicine. The presentation featured novel design-concepts, general strategies, and development of tools for HIV-1 protease inhibitors against HIV/AIDS and beta-secretase inhibitors against Alzheimer's disease. This was followed by a Silver Medal lecture by Vinod K. Singh, IISER Bhopal, who discussed about enantioselective reactions via dual activation using hydrogen-bonding organocatalysts. The silver medal lecture was followed by two bronze medal lectures by A. Srinivasan, NISER Bhubaneswar and Bhisma K. Patel, IIT Guwahati, who spoke about contracted porphyrinoids and alkylbenzene-based surrogates, respectively. The session ended with brief remarks by Marinda Li Wu, President, American Chemical Society, on CRSI-ACS cooperation.



K. N. Ganesh presents a memento to Vinod K. Singh for his Silver Medal Lecture at NSC-16 at IIT, Bombay

The first day of symposium ended with a facilitation program to celebrate the conferment of BHARAT RATNA, India's highest civilian honour, on C. N. R. Rao, Founder President of CRSI. He was felicitated by S. Chandrasekaran, President and A. Chakravorty and V. Krishnan, Past-Presidents of CRSI. Devang V. Khakhar, Director, IIT Bombay also participated and made his remarks in the felicitation function.



Felicitations of C. N. R. Rao by S. Chandrasekaran, President, CRSI.

The second day of the symposium started with C. N. R. Rao Award Lecture, which was delivered by Andrew B. Holmes, University of Melbourne, Australia. He talked about the challenges in synthesis and fabrication of solar cells from conjugated materials. He presented examples of large area printed devices and encapsulation techniques. Following this, William B. Tolman, University of Minnesota, USA, delivered the A. Chakravorty Endowment Lecture. Tolman discussed about copper-oxygen intermediates relevant to metalloenzymes and other oxidation catalysis with particular emphasis on dicopper species supported by binucleating ligands with pyridine donors. The session ended with a Silver Medal lecture by P. K. Chattaraj, IIT Kharagpur, who spoke about all-metal aromaticity and conceptual density functional theory. He discussed aromaticity and antiaromaticity in cyclic alkali clusters, polyacene analogues of inorganic ring compounds, multivalent superatoms, trigonal cyclic-bonded dianions.



T. K. Chandrashekar presents a certificate to William B. Tolman, University of Minnesota, USA for the A. Chakravorty Endowment Lecture at NSC-16 at IIT, Bombay

The NSC-16 consisted of a special session to celebrate the 50 years of chemistry at IIT Bombay. R. Murugavel, Head, Department of Chemistry, made the opening remarks with a short video showing the achievements of the department in last 50 years. The inaugural Golden Jubilee Lecture was delivered by C. N. R. Rao. In this session, two young scientists,

Anshu Pandey, IISc, Bangalore and Arindam Chowdhury, IIT Bombay, delivered lectures on semiconductor nanocrystals and single emitter spectroscopy, respectively. This was followed by the second poster session, where ~250 students presented their posters in all areas of chemistry.



Marinda Li Wu, President, American Chemical Society, presented a congratulatory message to the Department of Chemistry, IIT Bombay, for its 50 years of contributions to the Global Chemistry Enterprise.

The next session started with Mizhushima-Raman Lecture by Hiro-o Hamaguchi of National Chiao Tung University, Taiwan. He gave an overview of Raman Spectroscopy in the past and discussed some of his results on short-lived reaction intermediates and functional biomolecules in living cells, with a scope for the development of “tailor-made Raman Spectroscopy” in the future. Following this, M. Jayakannan, IISER, Pune, presented his Bronze Medal lecture on the applications of polymer vesicles as emerging platform for anticancer drug delivery. In another Bronze Medal lecture, Rukshana I. Kureshy, CSIR-CSMCRI, Bhavnagar, discussed about asymmetric transformations for the preparation of biologically important chiral compounds and development of novel chiral catalysts. All the medal winners received their medals in the General Body meeting. Two faculty members of the Department of Chemistry, IIT Bombay, Debabrata Maiti and G. Rajaraman received the CRSI Young Scientist Awards. Names of new President, Secretary, Council Members and other office bearers of CRSI for the period April 2014 – March 2017 were announced in this general body meeting.



S. Umopathy presents a memento to Hiro-o Hamaguchi of National Chiao Tung University, Taiwan for the Mizhushima-Raman Lecture at NSC-16 at IIT, Bombay

Lifetime Achievement Lectures (Gold Medal lectures) were delivered by S. S. Krishnamurthy, IISc, Bangalore and J. P. Mittal,

Bhabha Atomic Research Centre, Mumbai. S. S. Krishnamurthy highlighted the contributions of his research group to phosphorous chemistry during last four decades. The topics that he covered include the serendipitous discovery of novel bicyclic phosphazenes, mechanistic studies on the nucleophilic displacement reactions of halogeno cyclophosphazenes and an unusual ring-contraction-cum-rearrangement. He also presented an overview of his work on transition metal organometallic chemistry of cyclic and linear phosphorus ligand based on the “P-N-P” framework. J. P. Mittal shared the challenges and excitements of participation in a journey towards understanding the chemical transformations caused by the interaction of Photons. He also highlighted his recent work in pico and femtosecond time scale with relevance to problems of societal interest.



S. Chandrasekaran presents a memento to J. P. Mittal, BARC, Mumbai, at NSC-16, IIT, Bombay

The third day started with a CRSI Medal Lecture by Varinder K. Aggarwal, University of Bristol, UK, who discussed his work on the reactions of primary and secondary lithiated carbamates with boranes and boronic esters. He also discussed about a new method for the stereospecific cross-coupling of secondary and tertiary chiral boronic esters with electron rich aryl halides. In another CRSI Medal Lecture, Arunava Gupta talked about magnetic and semiconducting oxide and chalcogenide nanocrystals, with particular emphasis on the applications of the nanocrystals as inks for low-cost fabrication of thin film solar cells by spin or spray coatings. Amitava Patra of IACS, Kolkata, delivered the C. N. R. Rao National Prize in Chemical Sciences lecture on fluorescence dynamics of nanomaterials for potential applications.



Prasenjit Ghosh presents a memento to the chairperson E. D. Jemmis, at NSC-16, IIT, Bombay

In the next session, S. Goswami, IACS, Kolkata, presented a Silver Medal Lecture on metal coordinated azo-aromatic compounds

highlighting how the chemistry around the non-innocent ligands has been developed over a period of time. This lecture was followed by three Bronze Medal Lectures. I. N. N. Namboothiri, IIT Bombay, talked about catalytic asymmetric synthesis of novel multi-functional and bioactive molecules. C. V. Ramana of National Chemical Laboratory, Pune, discussed about catalytic transformations in total synthesis, particularly the synthesis of Isatisine A and Trigonolimine C involving C-C and C-heteroatom bond forming reactions. S. K. Mehta, Punjab University, Chandigarh, spoke on catalytic and sensor based applications of metallic nanoparticles. The session ended with a Silver Medal Lecture by S. Ramakrishnan, IISc, Bangalore, who discussed various approaches to control the chain conformation in macromolecules and how these approaches can help to control the organization of polymer chains in the bulk state.

The next session was dedicated to chemistry in industry, in which three scientists and entrepreneurs talked about the role of chemistry in industrial applications. J. Rheinheimer, Global Research Crop Protection, BASF, Germany, talked about fungicide research in plant production, with particular emphasis on the selection of novel compounds based on their biological performance, chemical structure and optimization for practical use. A. V. Rama Rao, Avra Laboratories Pvt. Ltd, Hyderabad, shared his experience in taking innovations to the market. He mentioned that in 1972, when the product patents were abolished by an act of Parliament, the then Prime Minister Mrs Indira Gandhi addressed all the CSIR scientists to initiate industrial projects to synthesize life-saving drugs. The speaker also mentioned how he became entrepreneur and founded Avra Laboratories in Hyderabad, to carry on "Research as Business". In the third lecture, R. J. Visser, Applied Materials, USA, spoke about precision materials engineering for solving critical industry inflections. After discussing various aspects of advanced materials development at the heart of several new opportunities, he concluded the talk with a message that materials development is crucial to drive and to enable the global technology inflections.



A. V. Rama Rao, Avra Laboratories Pvt. Ltd, Hyderabad, delivers a lecture in the thematic session "Chemistry in Industry" at NSC-16, IIT Bombay

In the last session of the symposium, three Bronze Medal Lectures were presented. S. Perumal, Madurai Kamaraj University, discussed his work on domino reactions in the construction of novel heterocycles. He talked about development of eco-friendly methods for the synthesis of biologically relevant heterocycles using Domino reaction strategies. R. K. Mahajan, Guru Nanak Dev University, Amritsar,

discussed about electrochemical sensors for cation and anion recognition. He talked about his group's efforts to design new sensors with high response characteristics towards particular analyte while maintaining design simplicity and reduced fabrication costs. The next lecture was delivered by A. C. Bhasikuttan, Bhabha Atomic Research Centre, Mumbai, who talked about molecular recognition in biomolecular assemblies. He discussed the photochemical perspective of thioflavin T on G-quadruplex DNA structures.



Swapan K. Ghosh presents a memento to A. C. Bhasikuttan, BARC, Mumbai, at NSC-16, IIT, Bombay

In the concluding session, the President presented best poster awards to students. The CRSI best poster awards went to Mitasree Maity (IISc Bangalore), Sanjog S. Nagarkar (IISER, Pune), Bhawani Narayan (JNCASR, Bangalore). Soumyajit Dey (IIT Kanpur) received a poster prize, instituted in memory of Bhaskar G. Maiya. Arghya Banerjee (IIT Guwahati) received the Goverdhan Mehta best poster prize in the area of organic chemistry. Three students, Subrata Saha (IACS, Kolkata), S. Saravanan (CSMCRI, Bhavnagar) and Bangaru Bhakararao (IIT, Bombay), received poster awards from the RSC Journals Dalton Transactions, Organic & Biomolecular Chemistry and Physical Chemistry & Chemical Physics, respectively. These prizes comprised of a year's free e-subscription to the journals and a certificate. Six students, Sharanjeet Kaur (GNDU, Amritsar), Nadeem Bashir (University of Kashmir, Srinagar), Jerome, P. (NIT, Trichy), Arun K. Shil (CSIR-IHBT, Palampur), Sarita Garnayak (NIT, Rourkela) and Sanjoy Keithellakpam (Manipur University, Imphal), received financial support from the RSC for their participation in the 8th CRSI-RSC Symposium and 16th NSC. The meeting ended with vote of thanks by the Secretary, N. Jayaraman.



S. Chandrasekaran presents a poster prize to Mitasree Maity, IISc Bangalore, at NSC-16, IIT, Bombay

## Highlights of the 8th CRSI-RSC Joint Symposium

The 8th CRSI-RSC joint symposium in chemistry was held on February 6, 2014. The symposium was inaugurated with the welcome address by S. Chandrasekaran, President CRSI and Tom Welton, Imperial College, London. S. Chandrasekaran and Tom Welton highlighted that the symposium is expected to foster collaboration between the UK and Indian scientists and benefit students from both the countries. The first invited lecture was delivered by T. K. Chandrashekar (NISER, Bhubaneswar and SERB, New Delhi). He talked about fused and bridged expanded porphyrins and the changes in electronic structure and reactivity on bridging and fusion. Following this lecture, Eric J. L. McInnes, University of Manchester, discussed his work on magnetic relaxation and molecular lanthanide alkoxides and M. Jeganmohan (IISER Pune) talked about ruthenium-catalyzed C-H bond functionalization of aromatics, alkenes and heteroaromatics supported by chelation. The first session of the symposium also had two lectures by Ph.D. students. Holly Reeve, University of Oxford, talked about immobilised enzyme cascades for clean, efficient cofactor-dependent chemical synthesis and Garima Jindal, IIT Bombay, discussed the origin of stereo-induction provided by axially chiral ligands.



CRSI-RSC joint symposium in chemistry at IIT Bombay

In the second session, Tom Welton, Imperial College, London elaborated the applications of ionic liquids in the biorefinery and Santanu Mukherjee, IISc Bangalore, discussed his recent results on controlling stereochemistry at the quaternary center with particular reference to olefin functionalization and desymmetrization. The next lecture was given by Siddharth Patwardhan of University of Strathclyde, who talked about bioinspired green nanomaterials and their applications in chemistry and Engineering. Devendra Mani, a Ph.D. student from IISc Bangalore, discussed how intermolecular interactions can be probed by using Molecular Beam Microwave spectroscopy, particularly in the context of understanding hydrogen bonding to carbon bonding. Edward J. Emmett, University of Oxford, spoke on the application of DABSO as an easy-to-handle sulfur dioxide surrogate in Palladium-mediated catalysis. The post-lunch session was dedicated to Chemical Education Program in which presentations were given by Tom Welton (Imperial College), Sayam Sengupta (NCL Pune) and Andrew Shaw (Exeter University). In addition to lectures, the speakers demonstrated some interesting chemistry experiments to school children.



Tom Welton demonstrates chemistry experiments in the Chemical Education Program at IIT Bombay

## Minutes of the General Body Meeting (GBM) held in IIT Bombay

The President S. Chandrasekaran formally welcomed the members and thanked them for taking time and effort to attend the general body meeting. In his opening remarks, the President first placed on record his sincere appreciation and thanks to D. S. Pandey and his colleagues for the successful organization of the 15th CRSI National Symposium in Chemistry (NSC-15) at Banaras Hindu University (BHU), Varanasi. He also appreciated Arun K. Isloor and his colleagues for successfully organizing the 2013 Mid-year symposium of the society at NITK, Surathkal, during July 12-13, 2013. He expressed his deep appreciation for the excellent arrangements made by the local organizers of NSC-16 and the CRSI-RSC symposium at IIT Bombay. This was followed by the confirmation of the minutes of the previous GBM.



CRSI General Body Meeting on February 8, 2014 during NSC-16 at IIT Bombay

The Secretary General, G. Mugesh, informed the General Body about the various activities of CRSI and the increase in the number of memberships to the Society. He indicated about the CRSI's efforts to provide financial support to students to participate in the CRSI-RSC and NSC meetings. He mentioned that the CRSI, in collaboration with the American Chemical Society (ACS), organized an Indo-US Symposium on Molecular Materials at the Indian Institute of Science, Bangalore, India during July 15-17, 2013. The symposium, which focused on all aspects of materials chemistry, was organized with funding support from the Indo-US Science & Technology Forum (IUSSTF) and Science and Engineering Research Board (SERB). He briefly mentioned about the meeting conducted by Wiley-VCH and

the Asian Chemical Editorial Society (ACES) at the Institute of Materials Research & Engineering (IMRE), Singapore on August 24, 2013, following the 15th Asian Chemical Congress (August 21-23, 2013). He mentioned that CRSI will be participating in the 10th ACES meeting, which will take place in Beijing on October 10, 2014. He also mentioned that the 2014 Mid-year symposium will be held in CSIR-NEIST, Jorhat, under the chairmanship of D. Ramaiah.



CRSI General Body Meeting on February 8, 2014 during NSC-16 at IIT Bombay

The President gave away medals to all the 2014 CRSI medalists. After the presentation of medals, items from the Council were discussed by the President. He mentioned that the award of CRSI medals to honor distinguished chemists of Indian origin was initiated five years ago, and Shankar Balasubramanian, Cambridge University, UK, has been selected to receive the medal for the year 2015 in recognition of his outstanding contributions to chemical biology, transcription factor, micro RNA, HIV RNA and modification of nucleic acids. He also mentioned that the following two scientists were selected for the CRSI Honorary Fellows for the year 2015: (i) Li-Jun Wan, Institute of Chemistry, Chinese Academy of Sciences, China, for his pioneering contributions to molecular self-assembly, advanced carbon materials, nanomaterials for environmental remediation and nanodevices for energy conversion and (ii) Keiji Maruoka, Department of Chemistry, Kyoto University, Kyoto, Japan, for his outstanding work in the areas of chiral phase transfer catalysts for amino acid synthesis, chiral organocatalysts, bidentate Lewis acid, and chemistry and application to selective organic synthesis. The members of the Society endorsed the same.



S. Chandrasekaran presents Gold Medal to S. S. Krishnamurthy, IISc, Bangalore, during the GBM at IIT Bombay

CRSI local chapter activities were also discussed. The President informed the members that the Council approved the addition of two new local chapters: Jammu and Kashmir (Conveners: K. K. Kapoor and G. M. Peerzada) and Surathkal/Mangalore (Conveners: Arun M. Isloor, B. Kalluraya). G. Mugesh mentioned that the CRSI has created individual web pages for each local chapter and requested the conveners to send information (events, symposia, photographs etc) for updating the website. One of the members pointed out that the CRSI should seriously consider strengthening the Chemical Education program and the President assured the members that the CRSI will try its best to increase the activities related to chemical education and request the local chapters to conduct discussion meetings, symposia involving teachers and students from schools and colleges.



General Body Meeting on February 8, 2014 during NSC-16 at IIT Bombay

As the term of the present Council ends on March 31, 2014, the President mentioned that the following names for the new Council and Office Bearers for the period April 2014 – March 2017 were approved by the Council: Founder President: C. N. R. Rao, Immediate Past-President: S. Chandrasekaran; President: Sourav Pal; Vice-Presidents: T. K. Chandrashekar, S. Goswami, U. Maitra, N. Sathyamurthy and Vinod K. Singh; Secretary General: G. Mugesh; Secretary: S. Patil; Treasurer: R. Murugavel; Jt. Secretaries: S. Bhattacharya, D.D. Dhavale, Kallol K. Ghosh, and R. Ramaraj; Jt. Treasurer: P. Gautam; Members: A. Ajayaghosh, Sanjay Batra, J. K. Bera, A. K. Chakraborti, S. Chandrasekhar, C.S. Gopinath, Neelima Gupta, M. P. S. Ishar, Nashreen Islam, Arun Isloor, V.K. Jain, S. Kulkarni, Vandana Bhalla, S. Mashraqui, Lalan Mishra, H. Naorem, A. K. Panda, D. Ramaiah, P. Ramamurthy, N. G. Ramesh, T. Rajamannar, A. Samanta, A. Srinivasan, V. Subramanian and Sanjay Trehan. The members of the Society endorsed the same.



General Body Meeting on February 8, 2014 during NSC-16 at IIT Bombay

The GBM also discussed about the revision of lifetime membership fee and registration fee for the CRSI meetings. It was decided to increase the lifetime membership fee from Rs 5,000.- to Rs 10,000.- from April 1, 2014. The revised fee structure for the annual and mid-year meetings is given below: Academic delegates: Rs 6,000, Industry delegates: Rs 10,000, Lifetime Members: Rs 4,000, Students: Rs 2,000, RSC/ACES/ACS: \$200, Accompanying person: Rs 3,000. The members were informed that the 17th CRSI Annual Meeting will be held at Gujarat University, during February 5-8, 2015, to be convened by Y.K. Agrawal and V. K. Jain. The general body meeting ended with a vote of thanks.



General Body Meeting on February 8, 2014 during NSC-16 at IIT Bombay

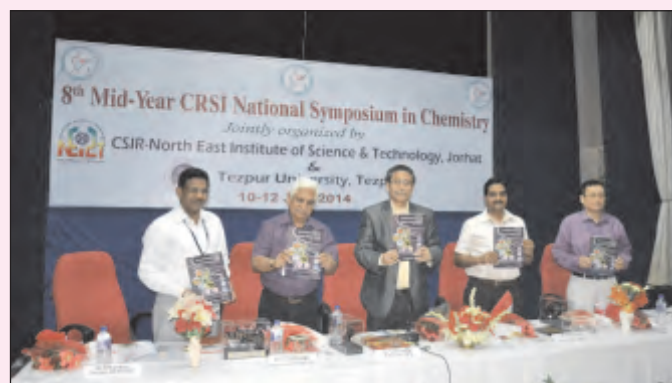
### Highlights of the Mid-Year Symposium 2014

The CSIR-North East Science & Technology (NEIST), Jorhat and Tezpur University, Tezpur, Assam jointly organized a two-day National Symposium in Chemistry under the support and auspices of the Chemical Research Society of India (CRSI) during July 10-12, 2014 at Dr J. N. Baruah Auditorium at CSIR-NEIST, Jorhat. This Mid-Year CRSI Symposium was the first of its kind to be organized at CSIR-NEIST. This symposium was largely attended by eminent scientists and professors in chemistry from various institutes and organizations across the country and faculty/students from IISc Bangalore, IITs (Bombay, Kanpur, Madras, Guwahati), IISERs (Kolkata, Bhopal, Pune, Mohali), Rajasthan University, Pune University, Gauhati University, Gujrat University, Manipur University, University of Hyderabad, JNCASR Bangalore, CSIR-NCL, Pune, CSIR-NIIST, Trivandrum, IACS Kolkata, NEHU, Shillong, BARC, Mumbai etc. have participated besides the scientific fraternity of CSIR-NEIST and Tezpur University.



CSIR-North East Science & Technology (NEIST), Jorhat

The programme started with the lighting of the lamp by the dignitaries viz., S. Chandrasekaran, Immediate Past President, Sourav Pal, President, CRSI and Director, NCL, Pune, G. Mugesh, Secretary General, CRSI, D. Ramaiah, Chairman, Local Organizing Committee and Director, CSIR-NEIST and R. C. Boruah, Co-Chairman, Local Organizing Committee and Outstanding Scientist, CSIR-NEIST. Welcoming the participants, D Ramaiah, Director, CSIR-NEIST, briefly mentioned the significance of this symposium in the region with 20 invited lectures and presentation of 141 numbers of posters for the researchers in chemistry across the country specifically the younger researchers. Mugesh expressed his happiness for the large number of registered participants of more than 350, which is the highest for a Mid-Year CRSI National Symposium.



Inauguration of the Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

In his presidential address, Sourav Pal advised the younger researchers to extract the benefit as far as possible from the symposium and requested to take the membership of this premier society of Chemistry in India. S. Chandrasekaran mentioned that CRSI is a unique undivided platform for all the researchers in Chemistry in the country and wished the symposium a grand success. On the occasion, a Souvenir including all the abstracts of invited lectures and poster presentation was released by S. Pal, President of CRSI. R. C. Boruah presented the vote of thanks, which was aptly anchored by Ms. Sangeeta Sharmah, Scientist, CSIR-NEIST.

The inaugural programme was immediately followed by technical sessions. In the symposium a total of 6 lead lectures and 14 invited lectures were delivered six sessions. This includes a thematic session on Natural Products-based Drugs. The lead lectures were given by S. Sampath (IISc, Bangalore), S. Baskaran (IIT Madras), Samar K. Das (University of Hyderabad), Romesh C. Boruah (CSIR-NEIST, Jorhat), N. C. Barua (CSIR-NEIST, Jorhat) and Swapan K. Ghosh (BARC, Mumbai). The invited lectures were given by 15 young scientists from various Institutions in India. They include, D. Maiti (IIT Bombay), P. Purkayastha (IISER, Kolkata), Neelima Gupta (Rajasthan University), Sangit Kumar (IISER Bhopal), Nisanth Nair (IIT Kanpur), Kanishka Biswas (JNCASR, Bangalore), Nasreen Islam (Tezpur University), Sayam Sengupta (NCL, Pune), H. N. Gopi (IISER Pune), A. Kumbhar (Pune University, Bronze Medal Lecture), A. K. Saikia (IIT Guwahati), P. Phukan (Gauhati University), G. Bez (North-Eastern Hill University, Shillong), S. Arulananda Babu (IISER Mohali).





Poster session of the Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

A special evening lecture was delivered by Gautam Baruah, Former Director, IIT Guwahati, who shared his experience and views on challenges and difficulties in building new Institutions in India. The mid-year meeting also contained an unusually large number of posters. All 141 posters in different branches of chemistry were presented by enthusiastic students on the second day of the symposium. A General Body Meeting was held in the evening, which was followed by a cultural program. Several traditional cultural performances of Assam were held in the evening including folk dances such as the famous Bihu dance with mesmerizing songs/music. The symposium provided an opportunity for the participants not only to share the excitements in chemistry, but also to enjoy the rich tradition and culture in the North-East region.



Cultural Program, Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

The symposium was successfully convened by D Prajapati, Chief Scientist, CSIR-NEIST along with the Co-conveners viz., DK Dutta, Chief Scientist, CSIR-NEIST and N. S. Islam, Tezpur University, Tezpur. The symposium is expected to have great impact for the Scientists, Professors and Researchers in Chemistry for collaboration, networking and exchange in exciting ideas across the country as well as in the region. In the concluding session, S. Pal presented the best poster prizes to the students. The participants were informed that the venue for the next annual symposium (NSC-17) and 9th CRSI-RSC joint symposium in chemistry has been changed and they will be held at CSIR-National Chemical Laboratory, Pune, during February 5-8, 2015. The symposium ended with concluding remarks and vote of thanks by Satish Patil, Secretary, CRSI.



Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

#### Minutes of the General Body Meeting held at CSIR-NEIST, Jorhat

The general body meeting was held at CSIR-NEIST, Jorhat, on July 11, 2014 during the 8th 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 D. Ramaiah (Chairperson), R. C. Boruah (Co-Chairperson), D. Prajapati (Convener) and D. K. Dutta and N. S. Islam (Co-Conveners) for the excellent organization of the 8th CRSI mid-year meeting. The CRSI president, Sourav Pal, then addressed the members and welcomed them again. This was followed by the formal confirmation of the minutes of the previous GBM. G. Mugesh then presented a brief report of activities of the CRSI. He mentioned the successful conduct of the 16th National Symposium in Chemistry (NSC-16) during February 7-9, 2014 and the 8th CRSI-RSC joint symposium in chemistry on February 6, 2014 at IIT Bombay.



General Body Meeting during the Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

The audited statement of accounts was circulated among the members and the Treasurer, R. Murugavel, presented the income and various expenditures for the year ended 31st March 2014. He mentioned that the fee for Life Membership has been increased to Rs 10,000 from April 1, 2014 and the registration fee for CRSI symposia has also been revised for various categories. The President and Treasurer emphasized the need to get funds through Institutional and Corporate memberships and requested the members to help the society to raise more funds. The audit report was accepted by the General Body. The President then announced the names of Gold, Silver and Bronze

Medal winners for the year 2015. He also announced the name of the scientists, who have been selected for the C. N. R. Rao National Prize for Chemical Research. After indicating that Shankar Balasubramanian, Cambridge University, UK, has already been selected during the NSC-16 at IIT Bombay for the CRSI medal, he proposed the name of Ram Seshadri, University of California, Santa Barbara, for the CRSI Medal. The names of all medal/award winners were accepted by the General Body.



General Body Meeting during the Mid-Year Symposium 2014 at CSIR-NEIST, Jorhat

The President mentioned that the CRSI office has received a letter from the students and admirers of S. Chandrasekaran, Honorary Professor at the Indian Institute of Science, regarding institution of an endowment lecture series in his name with a corpus fund of Rs 10 lakhs. To commemorate the contributions and services of S. Chandrasekaran to Indian Science, it was felt that CRSI may institute “Professor S. Chandrasekaran Endowment Lecture” as part of the CRSI-Annual Symposium. The endowment lecture will be delivered by a distinguished chemist in alternate years starting from 2015. The members of General Body readily gave their approval to establish an endowment lecture series. 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.

#### Tenth Asian Chemical Editorial Society (ACES) Meeting

CRSI is a member of the Asian Chemical Editorial Society (ACES), a unique association of thirteen major chemical societies of Asia and the Pacific regions. ACES, in collaboration with Wiley-VCH, publishes top-quality journals in chemistry with an international readership. ACES was founded in 2005 and currently publishes two major journals in chemistry: Chemistry – An Asian Journal (CAJ) and Asian Journal of Organic Chemistry (AJOC). The participating societies of ACES and Wiley-VCH are committed to provide scientific excellence, high publishing ethics and highest standards in publications. CAJ is supported by ChemPubSoc Europe, German Chemical Society (GDCh) and Federation of Asian Chemical Societies (FACS). CAJ has become a top chemistry journal. Through its co-ownership of CAJ and AJOC, the CRSI is strengthened by each article that gets published in either ACES journal and can in turn do more to support the chemical community in India. In addition, CRSI members get special benefits, including reduced rates for personal subscriptions to ACES journals.



Asian Chemical Editorial Society – An Organization of 13 Major Chemical Societies in Asia and the Pacific.

The 10th meeting of the ACES was organized at the Institute of Chemistry, Chinese Academy of Sciences on October 11, 2014. The meeting was attended by representatives from many of the ACES partner societies as well as from Wiley-VCH. Joint ACES activities, opportunities for further collaboration between ACES and Wiley-VCH and other related issues were discussed in the meeting. A key decision taken by ACES, partner societies and Wiley-VCH in the meeting was to start a new journal in the area of nanomaterials. The journal, ChemNanoMat, will focus on all aspects of chemistry of nanomaterials and their interdisciplinary applications and is expected to become a top-ranking materials chemistry journal for primary research papers (Full Papers and Communications) and review articles. ChemNanoMat will be published in close vicinity to *Angewandte Chemie* and *Advanced Materials*. It is the new sister journal to CAJ and AJOC, and further information can be found on the journal homepage under [www.chemnanomat.org](http://www.chemnanomat.org). The CRSI encourages its members to submit their next excellent paper, in the area of nanomaterials, to ChemNanoMat.



ACES, in collaboration with Wiley-VCH, now publishes three international journals, Chemistry – A Asian Journal, Asian Journal of Organic Chemistry and ChemNanoMat.

#### Activities of Local Chapters

**CRSI Local Chapter – Rajasthan** (Conveners: Anshu Dandia, Neelima Gupta and Raakhi Gupta) organized a series of events. As part of the local chapter activities, Suresh K. Bhargava, Director, Centre for Advanced Materials and Industrial Chemistry, RMIT University, Melbourne, Australia delivered a lecture entitled “Nanomaterials for Sensing, Diagnosis, Drug delivery and Electrochemical Applications” on December 18, 2013. The lecture was attended by a large number of faculty

members and students of Chemistry, Physics, Biology and Converging Technologies Departments of the University of Rajasthan. He also interacted with the students and teachers during his visit.



Lecture by Suresh K. Bhargava at University of Rajasthan.

On December 21, 2013, an invited talk entitled “Nanomaterials – Small is Beautiful” was delivered by renowned SCIENTOONS speaker Pradeep K. Srivastava, Medicinal and Process Chemistry Division, CSIR-CDRI, Lucknow. This lecture was organized specially for the students from the constituent under-graduate colleges along with the PG/research students to give them introduction to the subject in an interesting way with the help of Scientoons and attract them to pursue a carrier in related fields.



Lecture by Pradeep K. Srivastava at University of Rajasthan.

During the visit of Goverdhan Mehta, Past President of CRSI and National Research Professor and Lilly-Jubilant Chair Professor, University of Hyderabad to the Department of Chemistry on 21st January, 2014, a poster exhibition on contemporary research in chemical sciences was organized. In his inspirational address, Mehta motivated the students and gave constructive suggestions for promoting Chemistry Education. From a large number of posters, best presentations by the students were selected for the Certificates of Appreciation.

During January 30 – February 1, 2014, the local chapter organized a series of lectures for UG teachers from different affiliated colleges and PG/research students of the University of Rajasthan. A. K. Tyagi, Head, Solid State Chemistry Division, BARC, highlighted the importance of “Chemistry for a Better Future”, starting from early landmark discoveries by chemists, the effortless chemistry done by nature in a very illustrative way. His talk on “Contemporary Material Science - Role of

Chemistry” was much enlightening for the young researchers and made them aware to the avenues available for research in these areas. D.I. Brahmhatt, Sardar Patel University, Gujarat updated the audience on important curriculum topics of IUPAC Nomenclature and Spectroscopy.



Special Invitees at the Lecture Series at University of Rajasthan.

On the occasion of the celebration of the National Science Day on February 28, 2014, the IIS University, Jaipur, organized invited lectures for the students and faculty of the university and neighboring institutions. Deepan Ghosh, IIT, Mumbai delivered a lecture on “Nobel Prize in Chemistry” and Shishir Bhaduri, former faculty at IIT, Delhi and presently Director, MAIET, Jaipur gave a lecture on “Innovations in Science”. In an interactive session for research scholars organized on May 30, 2014 at the University of Rajasthan, M. Lakshmi Kantam, Director, CSIR-IICT, Hyderabad motivated the students to strengthen their analytical skills and improve the quality of publications. She inspired especially the women scholars to make carrier in Research and Development and made them aware of the availability of various Scholarships and Fellowships schemes meant for them.



Visit of M. Lakshmi Kantam to the Department of Chemistry, University of Rajasthan

With the beginning of new academic session, the Rajasthan Local Chapter planned to have outreach programs to promote awareness about future prospects of Chemical Sciences among UG and School students. As part of this program, it organized 'CRSI Chemistry Olympiad' for Senior Secondary students. The first round of the Olympiad was held in the month of August to mark the Celebration of the National Chemistry Week, in which 300 students from renowned CBSE schools of Jaipur participated. Second round of the Olympiad was held in October for the students of various schools of Udaipur and Kota. In Award distribution ceremony held on September 13, 2014 in the Department of Chemistry, University of Rajasthan, the CRSI

President, Sourav Pal felicitated the school toppers of first round and motivated the students and made them aware about future prospects of Chemical Sciences.



Sourav Pal presents certificates to the school toppers of the first round of CRSI Chemistry Olympiad at the University of Rajasthan.

An invited lecture by R.D. Kaushik, Dean, Faculty of Science, Gurukul Kangri University, Haridwar on the topic entitled "Vedic Sciences and Technology of Consciousness" was delivered on July 25, 2014. A. P. Singh Head, Catalysis Division, National Chemical Laboratory, Pune, delivered an invited talk on "Applications of Organo functionalized Catalyst in environmentally benign organic transformation – Fundamental aspects for the Synthesis of Zeolites" on July 28, 2014. D.D. Ozha, Former Senior Scientist in Ground Water Department, Jodhpur, delivered two invited talks on "Invisible Pollution and Health" and "Applications of Nanotechnology" on August 27, 2014. On September 13, 2014, a one-day Seminar on Quantum Chemistry for UG and PG students from various colleges in Jaipur was held in the Department of Chemistry, University of Rajasthan. In three lectures, Sourav Pal elucidated the basic principles of Quantum Chemistry as well as introduced the students to Computational Chemistry. On September 23, 2014 C.P. Rao, IIT Bombay delivered an invited talk on "Conjugates of carbohydrates and calixarenes with glycosidases".



C.P. Rao, IIT Bombay, delivers an invited talk at the University of Rajasthan, as part of the Local Chapter Activities

**CRSI Local Chapter – Trichy-Madurai** (Conveners: M. Palaniandavar and R. Ramaraj) organized one-day symposium for students and teachers of Higher Secondary Schools in Tamil Nadu. This meeting was organized by the Post-Graduate and Research Department of Chemistry, Vivekananda College, Madurai, on January 29, 2014. The symposium was attended by over one hundred and fifty students and teachers. R. Ramaraj, Convener, spoke about the purpose of the programme.

K. Pitchumani, Madurai Kamaraj University, Madurai, M. G. Sethuraman, S. Abraham John of Gandhigram Rural Institute, Gandhigram, Dindigul and V. Subramanian, Scientist, Central Leather Research Institute (CLRI), Chennai delivered lectures. They motivated the students to pursue basic sciences after their school studies. The participants gave very positive feedback on the programme. Swamiji Niyamananda Maharaj, Secretary of the institution, B. Ramamoorthy, Principal and S. Raja, Vice Principal provided their full support to conduct the meeting. M. Ganesan was the organizing secretary and V. K. Sivasubramanian coordinated the function. R. Sevvil, HOD took the active role in successfully conducting the meeting.



One-day symposium for students at Vivekananda College, Madurai, organized by the CRSI Trichy-Madurai Local Chapter.

With the growing importance and requirement of energy, the **CRSI-Mumbai Chapter** (Conveners: K. P. Kaliappan and A. K. Tyagi) organized a one-day seminar on "Energy Options for India: Nonconventional Sources of Energy" jointly with Mithibai College on August 23, 2014. Staff and students of all SVKM colleges, colleges affiliated to the Mumbai University and scientists from industry participated in the seminar. The lectures were delivered by experts in the field of nonconventional sources of energy such as, fission, solar, fuel cells, biofuels and geothermal energy etc. The seminar was inaugurated by B. N. Jagatap, Director, Chemical Group, BARC who gave a general overview of the prime nonconventional sources of energy available on the Indian scene. A. K. Tyagi, Co-convener, CRSI (Mumbai Chapter), mentioned the activities of CRSI, specially the Mumbai Chapter. Jayant Gandhi, Jt. Secretary of SVKM lauded the efforts of Z. R. Turel, the Convener of the seminar. D. V. Kamat, I/c Principal welcomed the guests and participants and informed the audience about the activities of Mithibai College respectively. R. Mirji, HOD, Chemistry Department delivered a vote of thanks.



One-day seminar on "Energy Options for India: Nonconventional Sources of Energy" organized by the CRSI Mumbai Local Chapter jointly with Mithibai College.

Over 150 students/faculty from all the faculties such as arts, commerce, maths, stats, biotech, geology, microbiology, chemistry, physics, engineering etc participated in the seminar. Various colleges from Mumbai and outstation, our own SVKM colleges and personnel from Industry took part in this Seminar. Lectures were delivered by D. Khushlani, TIFR, A. K. Tyagi, BARC, Z. R. Turel, Mithibai College, Arpita Gupte, D. Y. Patil College, D. Chandrasekharam, IIT Bombay. All the talks were highly appreciated by the students, who mentioned that the lectures were very informative. They also appreciated the reading material provided by the organizers. The I/c Principal, Convener and Staff of Mithibai College extended their sincere thanks for the cooperation extended by CRSI, SVKM management and Shri. Anil Murarka of MiraChem Industries for their financial support.



One-day seminar on “Energy Options for India: Nonconventional Sources of Energy” organized by the CRSI Mumbai Local Chapter jointly with Mithibai College.

**The CRSI Pune local chapter** (Conveners: C. S. Gopinath and Vidya Avasare) organised a one-day lecture and demonstration workshop on “Safe Chemical Laboratory Practices” on September 3, 2014 at Sir Parashurambhau (SP) College, Pune. About 275 students, 30 teachers from various colleges, in and around Pune, participated in the workshop. The workshop was convened by C. S. Gopinath in association with Vidya Avasare and other faculty members at SP College, Pune. Sourav Pal, President, CRSI inaugurated the workshop and addressed the gathering with the necessity of adopting safe practices, particularly in chemistry laboratories.



Inauguration of a one-day lecture-cum-demonstration workshop on “Safe Chemical Laboratory Practices” on September 3, 2014 at Sir Parashurambhau (SP) College, Pune.

Padmaja Ghorpade, Principal, SP College has supported the conference. Anuradha Kulkarni and Rajashree Kashalkar from

SP College welcomed the gathering. First technical lecture was presented by G. S. Grover (CSIR-NCL, Pune) on Practical approaches to safe chemical laboratories. Right from entering into the laboratory with apron, safety goggles and shoes, how to handle chemicals, what is the meaning of labels given on chemical bottles, MSDS data etc., he presented an overview of the safe practices. This was followed by a presentation by Ramakrishna Bhat (IISER-Pune) on “Incentives for good practices of safety in Chemical laboratories”. Bharat Dighe (Emcure Pharma) gave a presentation on industrial safety and the basic necessity to follow the safety procedures.



R. G. Bhat, IISER-Pune explains the incentives of following safe practices in chemistry laboratory at the workshop on “Safe Chemical Laboratory Practices” at Sir Parashurambhau (SP) College, Pune.

After the lunch break, a brief presentation was made by Ashtekar (Usha Fire Safety Equipments, Pune), who explained the meaning of alphabets given on fire extinguishers. This was followed by practical demonstrations with four variety of fire-fighting canisters on how to put-off fire. Many students actively participated and got the hands-on experience. Finally, Shabana Khan (IISER-Pune) performed a series of experiments on the stage with light and music to show the beauty of chemistry. She brewed a glass of beer and wine, synthesized polymer, etc. Indeed, she made a practical demonstration on how to enjoy chemistry while following safety rules. Many posters were presented by students from different colleges on safety aspects and five best posters, adjudged by speakers, were given a certificate and mementos. Many participants voluntarily came and gave positive feedback on the stage. The workshop ended with vote of thanks from organisers.



Participants are at the fire-fighting drill and gained hands-on experience at the workshop on “Safe Chemical Laboratory Practices” at Sir Parashurambhau (SP) College, Pune.

The **CRSI-Kolkata Chapter** (Conveners: S. Bhattacharya and Swadhin K. Mandal), in association with the Chemistry Department of Sidho-Kanho-Birsha University (SKBU), Purulia, West Bengal, organized a one-day symposium on “The Recent Progress in Chemistry – 2014: Celebration of 153rd birth anniversary of Acharya Prafulla Chandra Ray” on August 13, 2014 at SKBU. The event was attended by 106 delegates, which included representatives from different colleges, research institutes and universities across the state. After inauguration of the symposium by the Vice-Chancellor of SKBU, Samita Manna, and brief remarks by few dignitaries, Samaresh Bhattacharya of Jadavpur University, Kolkata, delivered the keynote lecture on “Acharya Prafulla Chandra Ray: Our Inspiration” in which he gave an overview of the different aspects of the all time great, and very unique, personality. This talk was very much appreciated from all corners in the inaugural session.



The one-day symposium on “The Recent Progress in Chemistry – 2014: Celebration of 153rd birth anniversary of Acharya Prafulla Chandra Ray” on August 13, 2014 at Sidho-Kanho-Birsha University.

Sreebrata Goswami of IACS, Kolkata, delivered the first invited lecture on “Redox Events in Transition Metal Complexes of Non-innocent Azoaromatic Ligands”, where he emphasized on electron-transfer studies of a few azo-metal complexes. Bimalendu Ray of Burdwan University delivered the next lecture on “Discovery and development of novel drug candidates: polysaccharides with pronounced pharmacological activities” where he showed some experimental evidences indicating that sulfated polysaccharides might become increasingly important in drug development for the prevention of sexually transmitted diseases in the near future. Arabinda Mallick of Kashipur M. M. Mahavidyalay, affiliated to SKBU delivered the last talk on “Fluorosensor Research: Our Efforts in Searching Simplicity both in Strategy and Utility Molecules” highlighting the development of new sensor based molecules.



S. Bhattacharya delivers a keynote lecture on “Acharya Prafulla Chandra Ray: Our Inspiration”.

In addition to the lectures, there was a poster session after the lunch break, where 27 posters were presented by different research groups. This poster session was highly interactive, and among these posters three were given the “best poster awards”. Subrata K. Dey was the Convener and Sadhana Khawas was the Co-convenor of the symposium. As SKBU, established in 2010, is situated at a very remote part of West Bengal, the interaction with leading scientists at the symposium served as a source of inspiration and great encouragement for all the faculty and students. This was particularly important for the department of chemistry, as this was the first educational programme conducted at the new university building. It should be noted that the first university seminar hall, where the symposium was held, was named as “A.P.C. Ray Seminar Hall, SKBU”.



Poster session during the one-day symposium on August 13, 2014 at Sidho-Kanho-Birsha University.

The **CRSI North East Region local chapter** (Conveners: B. K. Patel, P. Phukan and R. C. Deka) organized a Chemistry Education Program titled “Chemistry for sustainable development” in Dhemaji College, Dhemaji, on October 17, 2014. Dhemaji is situated on the northern bank of the Brahmaputra River and is located about 500 kilometers from the city of Guwahati. The program was organized by the Department of Chemistry, Dhemaji College, in association with the Golden Jubilee Celebration Committee, 2014-15 of the College. The objective of the lecture program was to impart knowledge and familiarize the 10+2 level students of this particular part of Assam about various aspects of chemistry. Dwipen Kakati of the Department of Chemistry, Dhemaji College and Prodeep Phukan of Gauhati University were the joint conveners of the program, which was inaugurated by B. Boruah, Principal of Dhemaji College. Many faculty members and school students studying in 10 +2 level at Dhemaji and nearby areas such as Moridhal. There were students from Silapather Science College, which is situated at the border of Assam and Arunachal Pradesh.



Education Program on Chemistry for sustainable development in Dhemaji College, Dhemaji, on October 17, 2014.

In the lecture program, P. Phukan delivered a lecture on the topic "Chemistry for Sustainable Development". After brief introduction on sustainable development, he discussed about applications of chemistry to agriculture, biology, biotechnology, environment, energy, electronics, materials, metallurgy, medicine, etc. Chemistry of life processes and impact of chemistry on various aspects of our daily life has been highlighted, particularly, in the field of health care, consumer products, energy, foodstuff and environment with some specific examples. A brief discussion on nanomaterials and nanotechnology was presented. Some recent developments such as nanobiotechnology, biomimetic chemistry, nitrogen activation, hydrogen production by water splitting were discussed with a brief mention about 2014 Nobel prizes in Chemistry.



Education Program on Chemistry for sustainable development in Dhemaji College, Dhemaji, on October 17, 2014.

On this occasion, R.C. Deka, Tezpur University, delivered a talk on the topic "Doing Chemistry with Computers". Computational modeling has become very important in understanding chemical process at atomic and molecular level. Using computer modeling, we can rapidly visualize the structures of complex systems such as enzymes, DNA, polymer and catalysts and can determine the active sites where reactions take place. The extensive use of computational methods is found in the field of drug design which is popularly known as Computer Aided Drug Design (CADD). D. K. Das delivered his speech on the topic "Life is Chemistry". He discussed about the role of various metals in life process. He discussed the important chemical constituents in fruits, vegetables etc, role of enzymes in various life process and the chemical reactions involved in biological hazards.



R. C. Deka delivers a lecture in the education program on chemistry for sustainable development in Dhemaji College, Dhemaji.

### CRSI Honorary Fellows, 2014-15

Li-Jun Wan, Institute of chemistry, Chinese Academy of Sciences, Beijing, China and Keiji Maruoka, Department of Chemistry, Kyoto University, Kyoto, Japan.

### Medals/Awards 2015

**C. N. R. Rao Award Lecture:** Toshiaki Enoki (Tokyo Institute of Technology, Tokyo, Japan).

**S. Chandrasekaran Endowment Lecture:** Dieter Enders (RWTH Aachen, Germany)

**Lifetime achievement award (CRSI Gold Medal):** Bidyendu Mohan Deb (Kolkata)

**CRSI Medals:** Shankar Balasubramanian (University of Cambridge, UK) and Ram Seshadri (University of California, Santa Barbara, USA)

**Silver Medals:** Amit Basak (Indian Institute of Technology, Kharagpur), P. K. Bharadwaj (Indian Institute of Technology, Kanpur), Anil Kumar (National Chemical Laboratory, Pune), Anunay Samanta (University of Hyderabad, Hyderabad)

**Darshan Ranganathan Memorial Lecture:** Sandeep Verma (Indian Institute of Technology, Kanpur)

**C. N. R. Rao National Prize for Chemical Research:** B. R. Jagirdar (Indian Institute of Science, Bangalore) and K. P. Kaliappan (Indian Institute of Technology, Bombay).

**Bronze Medals:** S. K. Asha (National Chemical Laboratory, Pune), Vandana Bhalla (Guru Nanak Dev University, Amritsar) Dipak Kumar Dutta (CSIR-North East Institute of Science and Technology, Jorhat), M. Eswaramoorthy (Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore), Subi J. George (Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore), Srinivas Hotha (Indian Institute of Science Education and Research, Pune), Rama Kant (University of Delhi, New Delhi), D. K. Maity (Bhabha Atomic Research Centre, Mumbai), Chhanda Mukhopadhyay (University of Calcutta, Kolkata), Amiya K. Panda (North Bengal University Darjeeling), Ashwini Phukan (Tezpur University, Tezpur), K. R. Prabhu, Indian Institute of Science, Bangalore), T. Punniyamurthy (Indian Institute of Technology, Guwahati), Sankar P. Rath (Indian Institute of Technology, Kanpur), G. Sekar (Indian Institute of Technology, Madras, Chennai), S. K. Srivastava (Manipur University, Manipur), R. B. Sunoj (Indian Institute of Technology, Bombay, Mumbai).

### New Membership

#### Institutional and Corporate Membership

Institutional and Corporate Members are those who make one-time contribution of an amount of not less than Rs. 1 lakh and 5 lakhs, respectively. Once enrolled as a member, the

Institution/Industry will be invited to participate in the CRSI annual and mid-year meetings and will be given a special discount on the registration fee. Every Institutional/Corporate Member can nominate a maximum of three persons to be members of the General Body in any given year and to participate in the annual and mid-year meetings of the Society. Recently, CSIR-National Chemical Laboratory (CSIR-NCL), Pune, CSIR-Central Leather Research Institute (CSIR-CLRI), Chennai, CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur, Indian Institute of Science Education and Research (IISER), Mohali and Shiv Nadar University (SNU), Dadri have become Institutional Members and SABIC Research & Technology Pvt. Ltd., Bangalore has become Corporate Member.

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](mailto:mugesh@ipc.iisc.ernet.in) or Raji Subramanyam, Email: [raji.subramanyam@gmail.com](mailto:raji.subramanyam@gmail.com). One can become a lifetime member of CRSI by paying Rs 10,000.- (Rupees Ten 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).