



CRSI



NEWSLETTER

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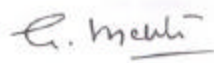


From the President's Desk

Dear Colleagues,

Following the tradition of these past few years, we had a well-attended, scientifically stimulating and interactive annual CRSI Symposium at IIT Kanpur. Besides many interesting lectures from Medal Awardees and Honorary Fellows, there was a very inspiring evening lecture by Professor CNR Rao attended by hundreds of school children and the IIT community.

We are grateful to the local organizing committee and particularly to Professor Satyamurthi and Professor Dhande, Director, IIT/K for making our stay comfortable and enjoyable. It is time to look forward to the 7th CRSI Symposium in Kolkata from Feb.4-6, 2005 and our hosts are busy drawing a very exciting scientific program. It is heartening to note that our local Chapters are very active and engaging young students to get the message of chemistry across. We also have many requests to start new chapters and these are being considered. The month of August is fast approaching and the first week is to be celebrated as the *National Chemistry Week* and I urge the local chapters to organize appropriate events to mark the event. It should be possible for the CRSI to provide small financial support for this purpose. Wishing you all best of research and happiness and looking forward to seeing you in Kolkata.



7th CRSI National Symposium in Chemistry

The next meeting of the CRSI and the seventh National Symposium will be held at IACS, Kolkata, during February 4-6, 2005. The first circular will soon be available (<http://www.iacs.res.in/crsi/>). For further details please visit the website or contact Kankan Bhattacharya (pckb@mahendra.iacs.res.in) or Brindavan Ranu (ocbr@mahendra.iacs.res.in), Conveners, Department of Physical/Organic Chemistry, IACS, Kolkata 700032.

Minutes of the Annual General Body Meeting held in Kanpur on 7th February, 2004

The meeting was chaired by G. Mehta, President of CRSI. 219 members attended the meeting. He welcomed the members of the Society and the minutes of the last meeting held in IISc., Bangalore in July 2003 were confirmed. S. Chandrasekaran, General Secretary/Vice-president presented an activity report of the Society. He informed the members of the formation of seven local chapters and their activities. He pointed out that the CRSI website at <http://crsi.org.in> has a lot of information and members can access all the updated activities of CRSI.

The President presented the CRSI medals to the awardees. The CRSI Silver medals were presented to J. Gopalakrishnan, S.R. Gadre and K.C. Majumdar. The CRSI Bronze medals were presented to Y.K. Agrawal, A. Basak, S.M.S. Chauhan, S. Ghosh, S. Kotha, J. Rao, Ramesh Chandra, V.K. Singh, A. Samanta, Subodh Kumar, K. Vijayamohan and S. Umapathy. The Young Scientist award of CRSI instituted by C.N.R. Rao was presented to J. Narasimhamurthy of IIT, Kanpur. Life time Achievement Award Lectures were given by M.M. Sharma and A. Chakraborty. After the lectures CRSI Gold Medals were presented to them by the President.



The President in his address mentioned about the growing activities of CRSI and the key role played by the Society in many of its activities through the Local Chapters. He stressed the importance of having a life membership of 1000 in a reasonable period of time. He complimented the work of U. Maitra in maintaining the website of CRSI. He appreciated the efforts of A.V. Rama Rao for instituting the C.N.R. Rao Lecture Award. The President brought to the General Body the various items discussed in the Council. He announced that the Honorary Fellowships of CRSI for the year 2005 have been conferred on the following two distinguished scientists from abroad – K.C. Nicolaou (Scripps Research Institute, USA) and H. Kroto (University of Sussex, UK).

The President informed the members that a new Local Chapter would be formed in Chandigarh. He requested the Local Chapters to celebrate the first week of August every year as National Chemistry Week and arrange discussions, meetings, symposia, popular science lectures in schools and colleges and also interact with chemical industries. He then informed the members that the next CRSI meeting (7th National Symposium) would be held at the Indian Association for the Cultivation of Science, Kolkata during Feb 4-6, 2005. K. Bhattacharya and B.C. Ranu (IACS) will be the Conveners of the symposium. The President then asked the members to get in touch with him about their ideas regarding new initiatives of CRSI. He also wanted the opinion of members regarding the lectures at the CRSI meeting – should we have only the medal lectures? Should we also have other invited lectures by chemists from India?

N. Sathyamurthy, Convener, 6th CRSI Meeting pointed out that it would be a good idea if the Life Members of CRSI intending to attend the meeting send their registration form well ahead of time and inform the Local Organizing Committee of the Symposium. This would help the Local Organizing Committee in planning all the arrangements. The general body approved this suggestion.

The President then thanked N. Sathyamurthy and his colleagues at IIT, Kanpur for the excellent arrangements and organization of the 6th CRSI symposium.

The Meeting ended with vote of thanks to the chair.

Highlights of the 6th National Symposium in Chemistry

The 6th "National Symposium in Chemistry" of the Chemical Research Society of India (CRSI) was organized by the Indian Institute of Technology (IIT), Kanpur with N. Sathyamurthy as the convener, during Feb 6 - 8, 2004. During these three days, IIT Kanpur witnessed a vigorous 'chemical activity' in its campus, with nearly 500 registered participants from all across the country and also chemistry teachers from the local Schools/Colleges actively participating in the Symposium. The Symposium lectures were delivered in six "Medal Lecture" sessions and included C. N. R. Rao Medal Lecture (instituted by A. V. Rama Rao Research Foundation, Hyderabad), lectures by honorary fellows and CRSI medal lectures. In addition, two poster sessions, a special session on chemical education program and a public lecture were held during the Symposium.

In his presidential address, G. Mehta described the recent results obtained in his laboratory on the synthesis of epoxyquinone based natural products. He demonstrated how one could successfully use simple, tabletop reagents to achieve the total synthesis of complex molecules like cycloepoxdon, jetsosterone, guanacasterpene etc. The highlight of the work was the remarkable combination of elegance and simplicity. Synthesis of over a dozen epoxyquinone derivatives having diverse structures was achieved using just six 'off-the-shelf' reagents! He summarized this scholarly presentation with an apt 'take home' message for the younger chemists exhorting them to seek 'simple solutions to complex problems'. H. W. Roesky who recalled his long association with India in general and with Prof. Rao, in particular, delivered the Prof. C.N.R. Rao medal lecture. A huge, multi-colored birthday card that Roesky created on-stage using his 'chemical magic' was presented to Prof. Rao. This was followed by a detailed presentation on the use of molecular inorganic supports as anchors for the fixation of organometallic fragments. He demonstrated the utility of such exotic assemblies in commercially important catalytic reactions.

J. Gopalakrishnan, in his silver medal lecture, discussed the importance of synthesis in solid-state chemistry; he showed how 'milder' synthetic strategies ('chimie douce') could be conveniently employed for the synthesis of new materials. S. Umapathy described the effectiveness of Raman and ultrafast spectroscopic techniques to address contemporary issues in chemical physics, such as participation of conical intersections in ultrafast processes and coupling of solute excitation to the solvent. While the lecture by Vinod Singh dwelt on the chirality transfer techniques in the total synthesis of biologically important natural products, that by A. Basak was on new synthetic strategies to the realization of enediyne type DNA cleaving agents.



The afternoon session of the day was initiated by Steven Ley (honorary fellow, CRSI) who, in his eloquent lecture, outlined the use of solid-supported reagents, designed in a sequential and multistep fashion, for the synthesis of varieties of biologically active molecules of commercial interest. Later, S. Ghosh presented his recent work on the synthesis of both the enantiomers of bicycloheptanes through the chirality transfer method. The general body meeting – an annual event of the CRSI - was held next, during which the CRSI medals including the young chemist award, instituted by C. N. R. Rao, were presented to this year's awardees by the President of the Society. The day ended with a memorable public lecture by C. N. R. Rao. In the address, he articulated the importance of chemistry in nanosciences and, further illustrated his point citing a range of examples of 'chemically fabricated' nanomaterials, developed in his laboratory in recent years.

The second day began with an invited lecture by Henry Kagan (honorary fellow, CRSI) who elaborated his new ideas on the possibility of evaluating enantioselectivity of a chiral catalyst from its racemic mixture. Gadre, in his silver medal lecture, demonstrated the power of theoretical methods coupled with the 'tailoring approach' developed by him for obtaining the *ab initio* quality one-electron properties of anions, hydrates, inorganic clusters, surfaces, peptides, drugs etc. This was followed by six brief presentations: While Jayathirtha Rao discussed the mechanistic details of photochemical cis – trans isomerization reactions of several interesting olefins, Subhodh Kumar described the molecular recognition and sensing proclivities of photoreactive receptors designed by him. Kotha reviewed the diversity-oriented approach towards the synthesis of various unusual alpha amino acids and polycyclics. Metalloporphyrin catalyzed oxygenation and oxidation of drugs and S. M. S. Chauhan discussed natural products. Later, K. Vijaymohan presented his recent discovery on the chain length dependence of electron transfer behavior of monolayer protected nanoclusters of Ag and Au and Ramesh Chandra discussed his efforts on the design and evaluation of new anti-cancer drugs

In the afternoon session, K. C. Mazumdar presented his studies on sigmatropic rearrangements and regioselective synthesis of bioactive heterocycles. A. Samanta highlighted his work on several simple, yet interesting, fluorophores that are capable of sensing metal ions and even the reaction medium itself. Y. K. Agarwal discussed the application of multifunctional ligands in

the analytical applications. The evening session was witness to nostalgic journeys from the past to the present in two life-time achievement gold medal addresses by M. M. Sharma and A. Chakravorty. During his lecture, M.M. Sharma brought out the importance of understanding the principles of chemistry in chemical engineering research and consultation work in chemical industry. He lucidly illustrated this point by citing examples from the repertoire of his own vast experience. In his inspiring lecture, A. Chakravorty reminisced some of the innumerable joyful moments that he experienced while working, over three decades, on molecular transition metal chemistry.

On the third day, besides an invited lecture by M. Shibasaki (honorary fellow), who spoke on the recent progress made by his group in the asymmetric two-center catalysis, a short session was devoted to the chemical education program. During the latter session, A. Elias illustrated a set of modern chemical experiments that can be carried out in any undergraduate laboratory. U. Maitra demonstrated the power of chemical software in understanding simple as well as complex issues in chemistry.

A major attraction of the Symposium was the two poster sessions held on February 6 and 7, in which young chemists from all over the country exhibited over 300 posters. The posters encompassed all branches of chemistry and were of high quality both in terms of content and presentation. Special Poster Presentation prizes to six young, bright chemists and a Best Chemistry Teacher award to a local chemistry teacher were presented in an award ceremony, which was followed by the concluding session. Overall, the symposium was a great success and it truly reflected the high quality of current chemical research in our country.

News Items

CRSI Honorary Fellows, 2004

K.C. Nicolaou (Scripps Research Institute, USA) and H. Kroto (University of Sussex, UK) are the new Honorary Fellows of CRSI.

Local Chapter Meetings, 2003

After the formation of the local/regional chapters of CRSI, the following regional meetings were held in 2003: at [MKU, Madurai](#) (21-22 July, 2003); at [IACS, Kolkata](#) (01 August, 2003); at [IIT Kanpur](#) (05 September, 2003) and at [RRL Trivandrum](#) (29 September, 2003). A seminar on *Advances in Chemistry* under the auspices of CRSI was also held at Aditanar College of Arts and Science, Tiruchendur. For details please visit the CRSI website.

CRSI gratefully acknowledges the receipt of Rs. 1,50,000 as a donation from the K.H. Group of Companies (Khizar Hussain & Sons), Tanners, Exporters & Importers, Chennai.

New Membership

For membership applications please write to: S. Chandrasekaran, Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, Tel: 080-2293-2404; Fax: 080-2360-0529; Email: crsi@crsi.org.in, The membership application can also be downloaded (pdf format) from the website. Annual Membership fee Rs. 200, Life membership fee: Rs. 2000.

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).

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