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2020 - 2023

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**FROM THE PRESIDENT'S DESK**

I took charge as the President, CRSI during a period when the world was facing a tough time due to the COVID-19 pandemic. We all had hoped that life would return to normal in due course, but as time passed, the number of corona positive cases kept on increasing. We still do not know when the life is going to be normal. Hope that we will be able to have our upcoming CRSI-RSC joint symposium and the 27th CRSI National Symposium in Chemistry (NSC) at IIT Guwahati as planned during February 11-14, 2021.



The 3rd CRSI-ACS symposium and 25th National Symposium in Chemistry (NSC) were organized at IIT Kanpur during July 18-22, 2019. This was a special year for the CRSI as well as for the IIT K, as it was the 20th anniversary of the society and the 60th anniversary of the Institute. It also happened to be the International Year of Periodic Table, which was celebrated by having special lectures by V. Chandrasekhar and Uday Maitra.

We successfully completed the 14th CRSI-RSC Symposium on 6th February 2020 and the 26th CRSI NSC during February 7-9, 2020 at VIT Vellore. It was a joyous moment to see the release of a special issue (2019, Volume 14, issue 24) of the Chemistry-An Asian Journal on the occasion of 20 years of CRSI. The issue has a foreword by Professor C.N.R. Rao, the Founding President of the CRSI followed by high-quality articles from our country. As per the tradition of the CRSI, the symposium started with the President's lecture followed by the medalists' talk. Professor N. Sathyamurthy, the then President's talk was unique where he correlated chemical oscillations with flowering.

Due to the current pandemic, we had to cancel CRSI-NSC that was to be held in July 2020 at IISER Kolkata. It will now be held at the same place during July 15-18, 2021. The sessions of CRSI-ACS, instead of being held on a preceding day, will now be integrated with the symposium.

The international collaboration of the CRSI is expanding. It has joined the Federation of Commonwealth Chemical Sciences Societies (in short 'Commonwealth Chemistry (CC)') that was set up in early 2019. Professor Vicki Gardiner of RACI, Australia was elected the President of CC this year. Professor Sourav Pal, former President of CRSI is one of the 12 members of its executive board. Due to the COVID-19 pandemic, the CC congress could not be held this year, and it will be held during May 16-19, 2021 at Trinidad and Tobago. The voting rights of CRSI in Asian Chemical Editorial Society (ACES) has gone up to 2. We will have a CRSI-ACES virtual symposium sometime in early October of this year.

CRSI is against any discrimination. It is one of the signatories to the statement on inclusion and diversity in chemical sciences, along with 25 other major societies across the globe.

In our meeting with the local chapters over zoom, it was emphasized that their activities should be made inclusive and the 1st week of November should be celebrated as a National Week of Chemistry. I am looking forward to seeing you all at IIT Guwahati.

Yours,

Vinod K. Singh

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**Special Issue ChemComm**

A virtual collection of articles published by the Indian researchers in ChemComm was brought out on the occasion of 20 years of CRSI. Sandeep Verma (Associate Editor, ChemComm) and G. Mugesh (Secretary General, CRSI) served as the guest editors for this virtual issue.



**ChemComm**  
Themed Collection: Celebrating the 20th Anniversary of the CRSI

- Curated by *ChemComm* Associate Editor Sandeep Verma & CRSI Secretary General Govindasamy Mugesh
- Highlighting the best *ChemComm* research from India
- With contributions from Debasis Banerjee, Abhishek Dey, Uday Maitra & many more!

Read now at:  
[rsc.li/crsi20](http://rsc.li/crsi20)

[@ChemComm](https://twitter.com/ChemComm) [blogs.rsc.org/cc/](http://blogs.rsc.org/cc/)

Virtual issue of collection of articles in ChemComm

**Special Issue Chemistry-An Asian Journal**

A special issue (2019, Volume 14, issue 24) of the Chemistry-An Asian Journal was brought out on the occasion of 20 years of CRSI. Sandeep Verma and G. Mugesh served as the guest editors for this special issue. The issue has a foreword by Professor C.N.R. Rao, the Founding President of CRSI, followed by high-quality articles from India.



Special issue of Chemistry-An Asian Journal

**The 27th and 28th CRSI National Symposia in Chemistry**

In view of the prevailing nationwide Covid-19 situation, the 27th CRSI National Symposium in Chemistry (NSC-27) scheduled to be held at IISER Kolkata during July 2020 is postponed till

July 2021. The 27th National Symposium in Chemistry (NSC-27 Convener: Tharmalingam Punniyamurthy, Email: [tpunni@iitg.ac.in](mailto:tpunni@iitg.ac.in)) will be organized by IIT Guwahati during February 12-14, 2021, along with the 15th CRSI-RSC joint symposium on February 11, 2021. The 28th CRSI National Symposium in Chemistry (NSC-28 Convener: Swadhin Mandal, Email: [swadhin.mandal@iiserkol.ac.in](mailto:swadhin.mandal@iiserkol.ac.in)) will be held at IISER Kolkata during July 2021.



IIT Guwahati, Venue for CRSI-NSC-27 in February 2021



IISER Kolkata, Venue for CRSI-NSC-28 in July 2021

**Highlights of the 25th CRSI National Symposium in Chemistry (NSC-25) and the 2nd CRSI-ACS Meeting**

The 25th CRSI National Symposium in Chemistry (NSC-25) was organized at Indian Institute of Technology Kanpur (IITK), Kanpur during July 19-21, 2019. The 2nd CRSI-ACS meeting was organized on July 18, 2019. The symposium, convened by Jitendra K. Bera and Nisanth N. Nair, was well attended by 273 registered participants including industry representatives. The symposium concluded with 9 technical sessions featuring 22 invited talks by the recipients of two CRSI Gold medals, one CRSI medal, one silver medal and 8 bronze medals from



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various academic institutions across India and abroad.

The symposium started with a formal inauguration by A. Karandikar (Director, IIT Kanpur), N. Sathyamurthy (President, CRSI), G. Mugesh (Secretary General and Vice-President, CRSI), A. Chandra (Head, Chemistry Department, IITK) and J. K. Bera (Convener, NSC-25). After the welcome remarks by the Convener, the Director, IIT Kanpur addressed the participants, highlighting the history of Chemistry at IIT Kanpur and extending a warm welcome to the delegates of the symposium. G. Mugesh gave the welcome address on behalf of CRSI. This was followed by the presidential address and a scientific lecture by N. Sathyamurthy, President, CRSI.



Inaugural session of NSC-25 at IIT Kanpur

In the first technical session after the inauguration, Viresh Rawal, University of Chicago, USA delivered the CRSI Medal lecture on new strategies and tactics for natural products synthesis. Dipak K Palit, Mumbai University, in his silver medal lecture described their recent results on ultrafast dynamics of hydrogen bond breaking and making. During the two bronze medal lectures in the session Parameswar K Iyer, IIT Guwahati talked about aggregation-induced enhanced emission, functional group engineered self-assembly and condensed state properties. Joyanta Choudhary, IISER Bhopal described switchable catalysis for reversible energy storage-delivery and CO<sub>2</sub> conversion to an alternative fuel.

In the first poster session after the lunch on day-1, about 75 students, postdocs and researchers enthusiastically presented the posters on their research work in all areas of chemistry and had lively discussions with experts in their fields. In the post lunch technical session II, Uday Maitra, IISc Bangalore delivered Darshan Ranganathan Memorial Lecture. He talked about bioanalytical applications of soft photoluminescent materials and elaborated his findings with some live



Viresh Rawal receiving CRSI Medal from CRSI President N. Sathyamurthy at NSC-25

experiments. A special lecture on the topic, "A tale of two molecular scalar fields" was given by Sridhar Gadre from Interdisciplinary School of Scientific Computing, Pune. He briefed the audience about his remarkable contributions in understanding molecular electrostatics using theoretical chemistry.



Darshan Ranganathan Memorial Lecture by Uday Maitra at NSC-25



Sridhar Gadre delivering a Special Lecture during NSC-25 at IITK



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In session III, the Gold Medal lecture was delivered by S. Sivaram, IISER Pune. Sivaram's inspiring lecture took the audience through his scientific journey with macromolecules, which included his innovative research in synthetic polymer chemistry especially polycarbonates, functional polymers, porous polymers, polymers from renewable resources, biodegradable polymers and polymer nanocomposites.



N. Sathyamurthy presenting the Gold Medal to S. Sivaram after his lecture during NSC-25 at IITK

The second day of the symposium started with the Asian Chemical Editorial Society (ACES) lecture delivered by Santanu Bhattacharya, IACS Kolkata. He described highly responsive fluorescent nanoscopic assemblies for sensing properties of lipid membranous milieu. This was followed by a lecture by M. Eswaramoorthy, JNCASR, Bengaluru, recipient of CNR Rao National Prize for Chemical Research. He elaborated on various aspects of reversible pore engineering and impact of charge reversal in mesoporous silica.



Presentation of the Award to Santanu Bhattacharya after Asian Chemical Editorial Society Lecture at NSC-25 at IITK



Presentation of CNR Rao National Prize for Chemical Research to M. Eswaramoorthy at NSC-25 at IITK

The fifth session on the second day was a special thematic session on Computers in Chemical Biology, where the recent developments in the applications of computational tools to challenging chemical biology problems were addressed by four young scientists – Sanjib Senapati from IIT Madras, Durba Sengupta from CSIR-NCL Pune, Govardhan Reddy from IISc Bengaluru and Jagannath Mondal from TIFR Hyderabad. The second poster session continued after the lunch break on Day-2.



Poster Session during NSC-25 at IIT Kanpur

A special session on the International Year of the Periodic Table was conducted in the evening to mark 150 years of Mendeleev's Periodic Table. The session was attended by a large number of students, who enjoyed listening to exciting stories about the history and making of the periodic table of elements as narrated by V. Chandrasekhar, TIFR Hyderabad/IIT Kanpur and Uday Maitra, IISc Bengaluru through on-stage live experiments.



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Special Session on IYPT during NSC-25 at IIT Kanpur

The seventh session after the tea break comprised the Gold Medal Lecture delivered by H. Ila, JNCASR, Bengaluru. Prof. Ila gave a talk on her journey in chemistry, starting from 1964. She presented a detailed account of her contribution in heterocyclic chemistry by the development of novel and efficient methods for the synthesis of polarized ketene S,S- and N,S-acetals as versatile building blocks for accessing biologically important heterocyclic scaffolds.



N. Sathyamurthy presenting the Life-time Achievement Award to H Ila at NSC-25

At the end of the proceedings of the second day, the General Body Meeting (GBM) was held at 6:20 PM. T. Govindaraju, Secretary, CRSI welcomed the members to the GBM and requested the President to conduct the proceedings. The meeting was conducted by N. Sathyamurthy, President, CRSI with initial remarks and he welcomed all the members to the GBM. The minutes of the GBM from NSC-24 were approved by the members. G. Mugesh, Secretary General presented an account of the annual activities of CRSI and the local chapters. An overview of the CRSI website and the detailed information

such as newsletter (July 2019), membership, activities, events, etc. were also presented to the GBM. The successful organization of NSC-24 at CSIR-CLRI Chennai during February 8-10, 2019 and 13th CRSI-RSC joint symposium at IIT Madras Campus on February 7, 2019 (Convener: V Subramanian and Co-convener: G Sekar) was brought to the attention of GBM. CRSI-RSC and CRSI-ACES Cooperation (ACES Journals) were highlighted. K. P. Kaliappan, the Treasurer, presented the audit report and the same was adopted by the GBM.



The Secretary General presenting the annual report in the GBM on July 20, 2019 at IITK

President N Sathyamurthy presented the different CRSI Medals and Prof. C. N. R. Rao National Prize in Chemical Research to the awardees for the year 2019.

On the third day, the bronze medal lectures were delivered during session VIII. Chayan K Nandi, IIT Mandi delivered his talk on the topic, paving the path to the future of carbogenic nano dots. Chada Raji Reddy, CSIR-IICT Hyderabad described in his talk the annulation of propargylic alcohols to heterocycles and polycyclic aromatics. Tapan Kanti Paine, IACS Kolkata discussed about bioinspired approaches used in his research



President, CRSI presenting the Bronze Medal to Ch. Raji Reddy at NSC-25



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work for selective catalytic oxidations by nonheme iron complexes. Parthasarathi Das, IIT (ISM) Dhanbad delivered his talk on expanding the medicinal chemistry toolbox. He described his research from method development to the delivery of drug like molecules. After a tea break, the Bronze Medal Lectures continued in session IX. Pranab Sarkar, Visva-Bharati University delivered his talk on in-silico understanding of the photovoltaic performance of hybrid nanostructures. Ashutosh V. Bedekar from MS University Baroda described his work on synthesis and study of conformationally twisted compounds and helical molecules.

The symposium was successfully convened by Jitendra K. Bera and Nisanth N. Nair. One of the highlights of this meeting was the intense scientific exchanges between many speakers and participants, especially students. The participants utilized the tea breaks effectively to engage in informal discussions. Two poster sessions having a total of 140 poster presentations gave ample opportunity to established researchers, postdocs, Ph.D. and Masters' students to discuss the recent developments in chemistry. N. Sathyamurthy presented the best poster prizes sponsored by CRSI, Journal of Chemical Sciences, ACS and RSC and certificates to the students at a special ceremony before the conclusion of the Meeting.



Poster Prize winners at NSC-25, IIT Kanpur

Overall, the meeting created an ideal platform for exchange of ideas and networking. In the concluding session, T. Govindaraju proposed the formal vote of thanks. The President, CRSI finally acknowledged the organizers (Convener, Director IIT Kanpur, volunteers, organizing committees) and all the participants for the successful meeting, and closed the event.



Group photo at NSC-25, IIT Kanpur

### Highlights of the 2nd CRSI-ACS meeting on July 18, 2019

The 2nd CRSI-ACS joint meeting in partnership with the American Chemical Society was organized on July 18, 2019 at IIT Kanpur. This one day program featured 12 speakers and a special trivia session in celebration of the International Year of the Periodic Table. The meeting was Inaugurated by the President, CRSI, N Sathyamurthy, Convener, J K Bera, A Chandra and the Anirban Mahapatra (ACS). The President, CRSI acknowledged the participation of ACS in the full day event during NSC-25. The proceedings of the meeting were held in four sessions on four different themes and the featured speakers included ACS editors.



Inauguration of CRSI-ACS meeting at IITK

In session I (Theoretical Chemistry), Biman Bagchi from Solid State and Structural Chemistry Unit, IISc, Bengaluru delivered his lecture on altered nature of water under nano-confinement and Srabanti Chaudhury, IISER Pune talked about the influence of polymer-pore interactions on the non-equilibrium dynamics



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of translocation. In session II (Chemistry of Materials), T. Pradeep, Associate Editor, ACS Sustainable Chemistry & Engineering from Indian Institute of Technology Madras delivered an invited lecture on Isotopic Exchange in Nanoparticles. Kaloboran Maiti, TIFR Mumbai gave his talk on Electron Spectroscopy of Novel Materials.



Sandeep Verma presenting a memento to T. Pradeep at CRSI-ACS Meeting in IIT Kanpur.

In session III on Organometallic Chemistry and Catalysis theme, Christopher Jones, Editor-in-Chief, ACS Catalysis, Georgia Institute of Technology, United States delivered his invited talk on the development of flow reactors to enhance scalability of rhodium-catalysed C-H activation in organic synthesis. Anukul Jana, TIFR-Hyderabad discussed about convenient access to pyrrolinium cations as a synthon for carbon based radicals in his talk.



V Chandrasekhar presenting a memento to Christopher Jones after his lecture in the CRSI-ACS meeting

The Fourth thematic session on Chemical Engineering started with an invited talk by Phillip E. Savage, Editor-in-Chief,

Industrial & Engineering Chemistry Research from the Pennsylvania State University, United States, who talked about reactions of biomolecules and biomass in hot compressed water. Sumesh P. Thampi, IIT Madras delivered his talk on interfacial migration as a mechanism of pattern formation in drying drops. Four senior PhD students from IIT Kanpur also gave short lectures in the meeting. The one day CRSI-ACS meeting concluded with a special session on IYPT Trivia.



Jayant K Singh presenting a memento to Phillip Savage at the CRSI-ACS Meeting at IIT Kanpur.

### Highlights of the 26th CRSI National Symposium in Chemistry (NSC-26)

The 26th National Symposium in Chemistry (NSC-26) was organized at VIT, Vellore during February 6-9, 2020. The symposium was convened by R Vijayaraghavan. On 7th February, the symposium was Inaugurated by the CRSI President, General Secretary, Convener, Registrar, Dean and Vice-President of VIT. The symposium comprised various



Inauguration of NSC-26 and the release of the abstract book at VIT, Vellore



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special, medal and award lectures, a thematic mini-symposium and two poster sessions. The inaugural session started with welcome remarks by R. Vijayaraghavan, Convener of the Symposium. G. Mugesh gave the welcome address on behalf of CRSI. Dean SAS and Registrar, VIT addressed the audience. The Abstract Book of the NSC-26 was released. This was followed by the presidential address and scientific lecture on chemical oscillations and synchronous pulsed flowering in *passiflora incarnata* by N. Sathyamurthy. The inaugural session concluded with the vote of thanks.

The President's lecture was followed by the scientific session, which began with the Animesh Chakravorty Endowment lecture by Andrew Borovik, University of California–Irvine, USA. He delivered his lecture on the topic, molecular complexity and inorganic chemistry: utilizing non-covalent interactions to control function. He described the design approaches developed by his group using key architectural features from active sites of metalloproteins as inspiration, to prepare systems that regulate local environments around a metal center. The CNR Rao National Prize Lecture was given by G.U. Kulkarni, JNCASR, Bengaluru. He described the synthesis of Au decahedra nuclei and the results obtained on the morphology of the microcrystals, the unusual lattice forms and their phase transitions using inhouse nanofocus synchrotron X-ray beamline facility.



V. Krishnan introducing Andrew Borovik before Animesh Chakravorty Endowment lecture at VIT, Vellore during NSC-26

The first poster session started after the lunch break. There were 70 posters presented by young researchers on the first day. In the afternoon Session III, four Bronze Medal Lectures were presented by Ranjani Viswanatha, JNCASR, Bengaluru on Mn emission: energy transfer or charge transfer, Manmohan

Kapur, IISER Bhopal on transition-metal-catalysed distal and remote functionalizations, Rajakumar Balla, IIT Madras on measurement of absorption cross-sections and kinetics of radicals relevant to the earth's atmosphere using cavity ring down spectroscopy and S. G. Srivatsan, IISER Pune on probing mood (structure) swings of non-canonical nucleic acid motifs. In the evening, a beautiful cultural programme was presented by the MSc students of VIT, Vellore.



President, CRSI presenting the CNR Rao National Prize to G.U. Kulkarni

The second day of the NSC began with the CNR Rao Award Lecture by Richard Catlow in Session IV. He presented his talk on application of modelling, synchrotron radiation and neutron scattering studies of structure, dynamics, and reactivity in catalytic systems. After this K. Vijayamohanan Pillai, IISER Tirupati presented his Silver Medal Lecture. He described the experimental and computational work done by his research group on electrochemical preparation, doping and applications of phosphorene quantum dots. He addressed various aspects of the structural distortion of black phosphorus to phosphorene quantum dots during the transformation.

Special and Medal lectures were presented in session V after the tea break. Tahei Tahara, Riken, Japan delivered the Mizushima-Raman Lecture. In his lecture, Tahara talked about the recent progress of their research in the area of femtosecond



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CNR Rao Award Lecture by Richard Catlow

time-domain Raman spectroscopy and its application to ultrafast photochemical and photobiological reactions. This was followed by the CRSI Medal Lecture by Jagadese J. Vittal, National University of Singapore. He gave a brief introduction to crystal engineering tools and described their application to modify and fine-tune chemical and physical properties of crystals under UV light. Third Charusita Chakravarty Memorial Lecture was delivered by Srabani Taraphder, IIT Kharagpur on the topic, reaction coordinate, free energy and kinetics in an enzyme catalyzed proton transfer reaction.



President, CRSI presenting the Award Certificate to Tahei Tahara after the Mizushima-Raman Lecture in NSC-26 at VIT, Vellore

The second poster session was held after lunch and more than 70 students, postdocs and researchers enthusiastically presented their posters on their research work in different areas of chemistry. This facilitated meetings and discussions among young delegates and experts.

In the post lunch session VI, three Medal Lectures were presented. In his Silver Medal Lecture, Subrata Ghosh, IACS, Kolkata explained some fascinating aspects of the synthesis of natural products with structural diversity, such as schintrialactones, ingenol, artemisinin and gracilioether. Mahesh Hariharan, IISER Thiruvananthapuram delivered the Bronze Medal Lecture on the topic, ultrafast excited state dynamics of twisted aromatics and Ashwani Kumar Tiwari, IISER Kolkata explained the effects of mode-mode coupling on the dissociation dynamics of  $\text{H}_2\text{O}$  and  $\text{CH}_4$  on metal surfaces in his Bronze Medal Lecture.



K Kaliappan presenting a memento to Subrata Ghosh after his Silver Medal Lecture at VIT, Vellore

The Session VII was dedicated to the Lifetime Achievement Gold Medal Award Lecture by T. Ramasami, CSIR-CLRI Chennai. Ramasami narrated the story of his evolution as a successful chemist highlighting the contributions of his research group over the years. He emphasized on the



Lifetime Achievement Gold Medal Award Lecture by T. Ramasami



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importance of three aspects of scientific research at different stages of a professional life, namely, discovery, solution and sustainability of solutions.

The General Body Meeting was held at 6:30 p.m. and was addressed by the President of the Society in the presence of the Secretary General, Secretary & Treasurer. Medals and Awards were presented to all the awardees, including the poster prize winners (RSC, ACS, IAS and endowment) in the award ceremony after the GBM.

In Session VIII on the third day of NSC-26, three Bronze Medal Lectures were delivered by E. Balaraman, IISER Tirupati, Gouriprasanna Roy, IIT Tirupati and Santanu Kumar Pal, IISER Mohali. Balaraman gave his lecture on non-noble metal catalysis: applications in dehydrogenation and related reactions, Gouriprasanna Roy presented recent results from his lab on biomimetic studies to understand the mechanism of Hg–C bond protonolysis by mercury-resistant organomercurial lyase MerB and Santanu Kumar described the work done in his lab on highly efficient ambipolar charge transport in semiconducting discotic liquid crystals.



Srabani Taraphder receiving the Charusita Chakravarty Bronze Medal Lecture Award from the President, CRSI at VIT, Vellore

In the thematic mini-symposium on “Sensors” in session VIII, six invited Lectures were presented by the faculty from VIT, Vellore. R. Vijayaraghavan delivered a talk on the development of sensors & prototype set up for fruit ripening application. Hongdoo Kim, Adjunct Faculty, VIT, Vellore discussed the piezocapacitive/piezoelectric sensor based on electro spun 20 nanowire web in his invited lecture. A. Senthilkumar discussed in his talk the use of redox active organic molecule functionalized carbon nanomaterials for elegant electrochemical immuno-sensing of shrimp-virus. S.

Senthilkumar, described his recent work on rationally designed ionic liquids for electrochemical sensing. S. K. Ashok Kumar presented his lecture on new thorium (IV) selective sensors and S. Sarveswari described the use of organic small molecules as chemosensors.



Past President, CRSI S Chandrasekaran presenting a memento to Ranjani Viswanatha after her Bronze Medal Lecture in NSC-26 at VIT, Vellore

The meeting was attended by about 300 registered participants, in addition to 25 invited speakers. The main aim of the NSC-26 meeting was to create a platform on which the scientists, teachers and students from various parts of the country could come together and discuss the recent developments in frontier areas of chemical research and help to build long lasting collaborative endeavors. The meeting concluded with a briefing session and information on the next CRSI meeting. The President, CRSI thanked the organizers, volunteers, organizing committees and all the participants for the successful meeting.



Group photo of the participants of NSC-26 at VIT Vellore



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**Minutes of the meeting of the General Body Meeting of CRSI held in VIT University, Vellore on February 08, 2020**

The meeting began at 6:30 PM, during the 26th National Symposium in Chemistry (NSC-26). T. Govindaraju, Secretary, invited N. Sathyamurthy, President, CRSI and G. Mugesh, Secretary General to conduct the proceedings of the GBM. The President welcomed all the members to the GBM and made the opening remarks.

- He thanked all the members for taking the time and effort to participate in the meeting.
- He expressed his deep appreciation of the excellent arrangements made by the local organizers (Vijayaraghavan and Team VIT Vellore) for the CRSI-NSC-26 and 14th CRSI-RSC symposia.

Members were informed that -

- CRSI-RSC collaboration continues with CRSI-RSC mini-symposium in February meeting and themed symposia in UK. The symposia in UK will be held during September 2020 in York and Durham on the themes Green Chemistry and Chemical biology.
- India's bid (CRSI together with Indian Chemical Society) for Asian Chemical Congress 2023 of the Federation of Asian Chemical Societies (FACS) during the ACC 2019 (December) was unsuccessful. ACC2023 will be hosted by Thailand. ACC 2021 will be held in Istanbul, Turkey.
- Federation of Commonwealth Chemistry Societies meeting was held under the Commonwealth Chemistry Task Group. It has been registered as Commonwealth Chemistry (CC). Prof. Sourav Pal was nominated for the position of the first President of CC. However, Vicky Gardiner, RACI, Australia was elected as the President. The next task group meeting to select the executive board members will be held on February 14, 2020. Sourav Pal has been nominated for the position. The first meeting of CC will be held in Trinidad and Tobago during May 20-21, 2020. Some CRSI members will be attending the meeting.
- Virtual collection of articles in Chem. Comm. and a special issue of Chemistry: an Asian Journal (Guest Editors: Sandeep Verma and G. Mugesh) have been brought out to celebrate the 20th anniversary of CRSI.

**Minutes of the GBM held in IIT Kanpur (25th CRSI-NSC) were confirmed by the members.**

The Secretary General, G. Mugesh presented an overview of the various activities of CRSI. The Council was informed that the membership has crossed 2520. Successful organization of CRSI-NSC-24 and the 13th CRSI-RSC symposium at CSIR-CLRI and IIT Madras (Conveners: V. Subramanian and G. Sekar) and CRSI-NSC-25 along with the 2nd CRSI-ACS joint symposium during July 18-21, 2019 (Conveners: J. K. Bera and Nisanth Nair) at IIT Kanpur was mentioned. IYPT-2019 programmes held at IIT Madras and IIT Kanpur were also highlighted. Highlighted the information about CRSI local chapters and ways to increase their activity.



The President addressing the GBM on February 8 at VIT Vellore

The President thanked the outgoing council/members for their support. The constitution of the new council by induction of new members was proposed. The proposed list of council members was endorsed by the GBM. The President announced that CRSI-NSC-27 (Convener: Swadhin Mandal) will be held at IISER Kolkata during July 16-19, 2020 and CRSI-NSC-28 will be organized by IIT Guwahati during February 11-14, 2021.

Finally, the GBM was concluded by thanking all the members.

**Highlights of the 14th CRSI-RSC Joint Symposium held at VIT, Vellore**

The 14th CRSI-RSC joint symposium in chemistry was held on February 6, 2019 at VIT Vellore. The symposium was inaugurated with welcome address by N. Sathyamurthy, President, CRSI and remarks by the Country Manager, Royal Society of Chemistry, London. It was emphasized that the Royal Society of Chemistry, UK has been partnering with CRSI



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in organizing a one day symposium, along with the CRSI-NSC over the years to promote collaboration between scientists from India and the UK, and to benefit students from both the countries. There were 10 Invited lectures including 2 Short invited student lectures in the event.



Inauguration ceremony of 14th CRSI-RSC Joint Symposium

The First invited lecture was delivered by David Amabilino, University of Nottingham on the topic self-assembling amphiphiles and dyes: fundamental thermodynamics, exotic architectures and responsive supramolecular systems. He described a modular approach to supramolecular materials preparation and results from their study of chirality effects on photoconductivity of twisted crystals. E. Arunan, IISc, Bangalore presented recent results of his group on microwave spectroscopic and computational investigations of large amplitude motions and inter/intramolecular bonding in carbon bonded complexes.



David Amabilino delivering a talk in 14th CRSI-RSC joint symposium, VIT Vellore

In session III, Michael Hayward, University of Oxford delivered the invited lecture on topochemical reduction and anion exchange as routes to new electronic materials. Sebastian C. Peter, JNCASR, Bengaluru, discussed his group's work on reduction of CO<sub>2</sub> into value-added chemicals using sunlight. Manjistha Mukherjee, IACS, Kolkata delivered her talk on C-H bond oxidation by iron porphyrin system using molecular O<sub>2</sub>: electrochemical tuning of the reactivity of heme superoxides and compounds. Puja Banerjee, IISc, Bengaluru presented her lecture on protein dimer dissociation as a complex reaction: free energy surface and role of solvent.

In the post lunch session, Shabana Khan, IISER Pune talked about the journey of N-heterocyclic silylenes from chemical curiosities to emerging ligands in catalysis. Andrew Lawrence, University of Edinburgh delivered his invited talk on the first total synthesis of brevianamide A, which includes a bio-inspired cascade transformation of the linearly fused (–)-dehydro-brevianamide E into the topologically complex bridged-spiro-fused structure of (+)-brevianamide A. In the next session, Ishu Saraogi, IISER Bhopal presented her work on chemical strategies for the development of novel therapeutic agents and Ruth Webster, University of Bath gave a talk on seeking heteroatom rich compounds using iron catalysis. The evening ended with the vote of thanks by Vijayaraghavan.



R Vijayaraghavan presenting a Memento to Michael Hayward after his talk in the 14th CRSI-RSC joint symposium,



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E Arunan delivering a talk in the 14th CRSI-RSC joint symposium, VIT Vellore.

### Minutes of the General Body Meeting (GBM) held on July 16, 2020 through Online Platform

The meeting began with a welcome remark by the Secretary to all the members of the GBM. He invited the President to conduct the GBM's proceedings. The President formally welcomed the members and thanked them for taking the time and effort to participate in the GBM. He expressed his deep appreciation to all the members of the previous Council and their contributions to the activities of the Society. He briefed the members about the following points:

- Council's decision for the cancellation of this year's CRSI-NSC due to the current pandemic. This was supposed to be held at IISER Kolkata during July 16-19, 2020.
- Creation of a twitter handle of the CRSI (@ChemResSocIndia).
- Activities of ACES and Commonwealth Chemistry (CC). The important point was that the voting right of CRSI in ACES has become now 2.
- The CC Congress, that was cancelled this year, will now be held during May 16-19, 2021 at Trinidad and Tobago. The CC is organizing a virtual poster session event, "Building the Partnership (Bridging Chemistry Across the Commonwealth) to Tackle the SDGs" August 25-27, 2020 for Early Career Chemists (ECC).

The minutes of the previous GBM held at VIT University, Vellore on February 08, 2020 was confirmed. The Secretary General made a brief presentation about the various activities of the Society. He also presented the decisions adopted in the Council Meeting held on 15th July, 2020 for GBM to endorse it. The salient points were:

- The successful completion of the 14th CRSI-RSC Symposium and 26th CRSI-NSC, during Feb. 6-9, 2020, convened by Prof. R. Vijayaraghavan, of VIT Vellore.
- The upcoming events: 15th CRSI-RSC (12th Feb, 2021) and 27th CRSI-NSC (Feb, 13-15, 2021) symposia will be held at IIT Guwahati.
- The cancelled CRSI-NSC meeting of this year due to the current pandemic will be held in July 2021 at IISER Kolkata as NSC-28
- Now onward, the ACS Sessions of CRSI-ACS Symposium will be integrated with the CRSI-NSC.
- CRSI is one of the signatories to the statement on inclusion and diversity in the chemical sciences, along with 25 other major chemical societies across the globe.
- The local chapters were reorganized with new conveners/co-conveners for 2020-2023.

The Treasurer made a brief presentation of the audited statement of the accounts of the Society. The President announced the names of medalists, Honorary Fellows, and special speakers in all the categories for the year 2021 and the same was adopted.

#### Honorary Fellows

1. David Milstein, WIS, Rehovot, Israel
2. Paul S. Weiss, UCLA, Los Angeles, USA

#### CRSI Medals

1. Francis D'Souza, UNT, Denton, USA
2. R. Krishnamurthy, TSRI, La Jolla, USA

#### Lifetime Achievement Award (Gold Medal)

1. K. L. Sebastian, IIT Palakkad

#### Silver Medals

1. Jitendra K. Bera, IIT Kanpur
2. T. Pradeep, IIT Madras

#### Bronze Medals

1. Ruchi Anand, IIT Bombay
2. P. Anbarasan, IIT Madras
3. Prabal Banerjee, IIT Ropar
4. Alakesh Bisai, IISER Kolkata
5. Goutam Brahmachari, Visva-Bharati, Santiniketan
6. Harinath Chakrapani, IISER Pune
7. Abhishek Dey, IACS, Kolkata
8. Dimple P. Dutta, BARC, Mumbai



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9. Bikash K. Jena, CSIR-IMMT, Bhubaneswar
10. Bimlesh Lochab, SNU, Dadri
11. Sukhendu Mandal, IISER Thiruvananthapuram
12. Saptarshi Mukherjee, IISER Bhopal
13. Srihari Pabbaraja, CSIR-IICT, Hyderabad
14. Tarun Panda, IIT Hyderabad
15. Sebastian C. Peter, JNCASR, Bangalore
16. U. Deva Priyakumar, IIIT Hyderabad
17. R. Ramesh, BDU, Tiruchirappalli
18. Pradeep Singh, IIT Kharagpur
19. Vinod K. Tiwari, BHU, Varanasi
20. C. V. Yelamaggad, CeNS, Bangalore

**Darshan Ranganathan Memorial Lecture**

- Vibha Tandon, JNU, New Delhi

**Charusita Chakravarty Memorial lecture**

- Sarika M. Bhattacharyya, CSIR-NCL, Pune

**CNR Rao Award Lecture**

- Bettina V. Lotsch, MPI, Stuttgart, Germany

**CNR Rao National Prize for Chemical Sciences**

- A. Sundaresan, JNCASR

**Professor S. Chandrasekaran Endowment Lecture**

- Arun Ghosh, Purdue University, USA

Broad guidelines for CRSI Bronze, Silver, and Gold medals were adopted. The same will be uploaded on the CRSI website. Charusita Chakravarty, Darshan Ranganathan Memorial Lectures, Prof. Animesh Chakravorty Endowment Lecture and Prof. S. Chandrasekaran Endowment Lecture will continue to be held bi-annually (once in 2 years).

Prof. Sourav Pal, the Past President, CRSI made a brief introduction about the genesis of the Federation of Commonwealth Chemical Sciences Societies (in short 'Commonwealth Chemistry' CC). A task force of CC was set-up in January this year and he was nominated as one of the 12 members of the Executive Board of CC. Vicki Gardiner of RACI, Australia, became the President of CC. CRSI, as a member Society, joined CC. Formal process is to be completed. Federation of Asian Chemical Societies (FACS) had its meeting in Taiwan along with ACC (Asian Chemical Congress), where his two terms in the Executive Council of FACS ended. Prof. Sourav Pal also announced that the 28th CRSI-NSC Meeting would be held at IISER Kolkata during July 15-18, 2021. The ACS will be its part.

The GBM adopted all the items presented above. The meeting ended with thanks to all the members. Total 130 Members attended the Meeting.

**Activities of Local Chapters**

The CRSI Local Chapter of Chhattisgarh (Convener: Kallol K Ghosh) organized a popular lecture on August 07, 2019 in School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur which was attended by a large number of students, research scholars and faculty members of the University Teaching Department. Srivari Chandrasekhar, Director CSIR Indian Institute of Chemical Technology, Hyderabad delivered a lecture on "Molecules that Changed Life" and discussed about the drug molecules having a live saving role in our life. His lecture emphasized on their contributions and recent innovative methods in the field of drug discovery, role of natural products in affordable healthcare. Prathama S. Mainkar, Senior Principal Scientist, CSIR-IICT, Hyderabad also interacted with young minds and responded to their queries. Shamsh Pervez, Head School of Studies in Chemistry gave the welcome address. Another popular lecture entitled "Towards Excellence in Basic Sciences in the 21st Century: Challenges and Opportunities" by Ashok K. Bakhshi, Chairman of National Resource Centre of Chemistry of the MHRD and Vice Chancellor, PDM University, Bahadurgarh, Haryana was organized on November 12, 2019. Keshari Lal Verma, Vice-Chancellor, Pt. Ravishankar Shukla University presided over the function and Kallol K Ghosh introduced the guest and discussed about various activities of the local chapter. Bhanushree Gupta conducted the program. Professor Bakhshi shared his view and perspectives about the role of



Popular lecture of Srivari Chandrasekhar, Director CSIR-IICT, Hyderabad organized by CRSI Local Chapter Chhattisgarh at Pt. Ravishankar Shukla University, Raipur on August 07, 2019



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basic sciences in the current scenario. His lecture emphasized on the remarkable aspects of fundamental theories and contributions of Chemical Sciences. He also interacted with the faculty members, research scholars and students of centre for basic sciences and chemistry.



Ashok K. Bakhshi, Chairman of National Resource Centre of Chemistry, MHRD delivering lecture at Ravishankar Shukla University, Raipur on November 12, 2019

The North East Local Chapter of the CRSI (Conveners: Prodeep Phukan, Ramesh Ch. Deka) A special lecture programme on the topic, "Chemistry for sustainable development: contribution of periodic table for advancement of science" was organized under the auspices of local chapter at Nowgong Girls' College, Nagaon on August, 17, 2019. The objective of the programme was to familiarize the college students about various aspects of Periodic Table and its contribution to the advancement of science. Prodeep Phukan and Ramesh Ch. Deka were the speakers of the lecture programme. The programme was inaugurated by Balin Kr. Bhuyan, Principal of Nowgong Girls' College and attended by 10+2 level students as well as B.Sc. students of science streams from colleges of Nagaon. Prodeep Phukan's lecture began with a note on the contribution of chemistry for sustainable development. He explained the genesis of the periodic table, starting from the attempt made by Lavoisier in 1789. The development at different stages, particularly in Europe that led to the creation of



Special Lecture organized by CRSI North-East Chapter

Mendeleev's table was explained systematically. Ramesh Ch. Deka spoke about the quantum mechanical aspects of different atoms and molecules and a brief life sketch of Dr. Radhikaram Dhekiyal Phookan, who did his Ph.D. from Heidelberg University in the year 1890. The programme ended with concluding remarks by the Principal, Nowgong Girls College.

The CRSI Local Chapter Rajasthan (Conveners: Anshu Dandia, Neelima Gupta and Raakhi Gupta). To commemorate the International Year of the Periodic Table (IYPT-19), members of the CRSI Local Chapter delivered several popular lectures at different local colleges and motivated the students to make career in chemical sciences. 5th International Conference of the series, "Frontiers at the Chemistry-Allied Sciences Interface (FCASI-2020), was organized on June 30, 2020 as a one-day E-Symposium under the joint banner of CRSI Rajasthan Chapter with present CRSI President Vinod K Singh as one of the Patrons. Convener of the Conference, Neelima Gupta gave the welcome address. Former CRSI president Sourav Pal delivered the Inaugural lecture on 'Chemistry in new normal: research and education.' Other speakers included Chin Fa Lee from Taiwan, Anamik Shah from Gandhinagar and Ashok Prasad from Delhi University. The E-conference was attended by >150 delegates from different parts of the Country.

### Reorganized Local Chapters of CRSI with new Conveners/Co-conveners for 2020-2023

Local Chapter	Convener/Co-convener
Ahmedabad	Sivapriya Kirubakaran / S. Saravanan
Bhubaneswar	V. Krishnan / Akhiesh K. Singh
Chandigarh/Amritsar	Vijaya Anand / Vandana Bhalla
Chhattisgarh	Kallol K Ghosh / Goutam Patra and Satyajit Gupta
Chennai	G. Sekar / A. K. Mohanakrishnan and S. Easwaramoorthi
Chidambaram	S Kothai Nayaki / I Muthuvel
Delhi	Rama Kant / Pramit K Chowdhary and Pritam Mukhopadhyay
Hyderabad	C. Raji Reddy / Akhila Sahoo/ Dr. S. Saravanan
Jaipur	Nighat Fahmi /Easwar Srinivasan
Jammu/Kashmir	V. Sreedharan / Pankaj Chauhan
Kanpur/Lucknow	Raja Angamuthu/Namrata Rastogi
Kharagpur	Swagata Dasgupta / Amiya Kumar Panda
Kolkata	Swadhin Kumar Mandal / Chaitali Mukhopadhyay and Suhrit Ghosh
Mumbai	Ruchi Anand/Vivek Polshettiwar
North-East region	P Phukan / Parameshwar Iyer and Nashreen S Islam
Pune	Srinivas Hotha / Vidya Avasare
Suratkal/Mangalore	Arun Isloor / Debashree Chakraborty
Trivandrum/Cochin/Calicut	Mahesh Hariharan / CH Suresh and P Kurup
Tiruchi/Madurai	R MayilMurugan / R Ramesh
Varanasi	D S Pandey/ V Ramanathan

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**CRSI-Asian Chemical Editorial Society Cooperation:**

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 it 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, CRSI is strengthened by each article that gets published in either ACES journal and can in turn do more to support the chemistry community in India. In addition, CRSI members get special benefits, including reduced rates for personal subscriptions to ACES journals.



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

**CRSI Membership**

For membership applications or related queries, please write to: N. Jayaraman, Department of Organic Chemistry, Indian Institute of Science, Bengaluru 560012, Tel: +91-80-2360-2578; Email: [jayaraman@iisc.ac.in](mailto:jayaraman@iisc.ac.in) or [crsindia1999@gmail.com](mailto:crsindia1999@gmail.com).

One can become a lifetime member of CRSI by paying Rs 10,000.- (Rs 5,000.- for students) as membership fee. The payment can be made by electronic transfer or demand draft. Details can be found at the CRSI website (<http://www.crsi.org.in>).

Special discount for students: If a student becomes a Life Member of CRSI after paying Rs 5,000.00 (discounted fee), his/her registration fee will be waived for the corresponding CRSI National Symposium in Chemistry (NSC). It is mandatory for the students to become a Life member of CRSI to attend

meetings and present posters. For example, the students who would like to participate in the 27th CRSI National Symposium in Chemistry (CRSI-NSC-27) at IIT Guwahati during February 12-14, 2021, should become members of the society before registering for the symposium. A copy of the membership payment receipt (obtained from CRSI) should be uploaded during the registration or sent to the Convener, CRSI-NSC-27 to avail the fee waiver.

A Lifetime Membership card will be sent to all the student members and they can avail the membership benefits such as discount on the registration fee, etc. for all future CRSI conferences. A copy of the CRSI Newsletter, information about joint symposia etc. will also be sent to them.

An Institutional Member is one who makes a one-time contribution of an amount of not less than Rs. 1 lakh as donation to the Society. Once enrolled as a member, the Institution 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 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. The nominated members will be treated on par with the "Life Members" of CRSI. The Institution will also receive information about various activities of CRSI and three copies of the annual newsletter.

The names of the Institutional members will be prominently displayed in the website of the Society and important activities of the Institution related to chemistry will be published in the CRSI newsletter.

A Corporate Member is one who makes a one-time contribution of an amount of not less than Rs. 5 lakhs as donation to the Society. Once enrolled as a member, the company 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 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. The nominated members will be treated on par with the "Life Members" of CRSI. The company will also receive information about various activities of CRSI and three copies of the annual newsletter. The names of the Corporate Members will be prominently displayed on the website of the Society with a link to the Company.

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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