

# Chemical Research Society of India

## 26<sup>th</sup> National Symposium in Chemistry (CRSI-NSC-26)

February 07-09, 2020

&

## 14<sup>th</sup> CRSI-RSC Joint Symposium

Feb 06, 2020



Organized by  
**Department of Chemistry**  
**School of Advanced Science, VIT Vellore**

### About CRSI

The Chemical Research Society of India (CRSI) was established in 1999 as part of the 50th anniversary celebrations of the country's independence. Currently, CRSI represents more than 2300 lifetime members, who participate in the study, practice, teaching and promotion of Chemistry. The main objectives of the CRSI are to recognize, promote, foster talent in Chemistry and Chemical Sciences and to improve the quality of Chemical Education at all levels. The CRSI organizes conferences, seminars, workshops and other related programs to facilitate and promote research in all branches of Chemistry. The society has active collaboration with the Royal Society of Chemistry (RSC) London, American Chemical Society (ACS), Asian Chemical Editorial Society (ACES), the German Chemical Society (GDCh) and the French Chemical Society.

### Governing body of CRSI

<b>President</b>	<b>Prof. N. Sathyamurthy</b> , Former Director, IISER Mohali
<b>Immediate Past President</b>	<b>Prof. Sourav Pal</b> , IISER Kolkata, Kolkata
<b>Founder President</b>	<b>Bharat Ratna Prof. C. N. R. Rao</b> , JNCASR, Bangalore
<b>Vice Presidents</b>	<b>Prof. S. Chandrasekhar</b> , CSIR-IICT, Hyderabad <b>Prof. R. Murugavel</b> , IIT Bombay, Mumbai <b>Prof. D. Ramaiah</b> , CSIR-NEIST, Jorhat <b>Prof. Vinod K. Singh</b> , IIT Kanpur, Kanpur
<b>Vice President &amp; Secretary General</b>	<b>Prof. G. Mugesh</b> , IISc, Bangalore
<b>Secretaries</b>	<b>Prof. Satish Patil</b> , IISc, Bangalore <b>Prof. T. Govindaraju</b> , JNCASR, Bangalore
<b>Treasurer</b>	<b>Prof. Krishna P. Kaliappan</b> , IIT Bombay, Mumbai
<b>Joint Secretaries</b>	<b>Prof. P. Phukan</b> , Gauhati University, Guwahati <b>Prof. K. R. Prabhu</b> , IISc, Bangalore <b>Dr. C. V. Ramana</b> , CSIR-NCL, Pune <b>Prof. A. K. Tyagi</b> , BARC, Mumbai
<b>Joint Treasurer</b>	<b>Prof. P. Gautam</b> , Anna University, Chennai

### Council Members

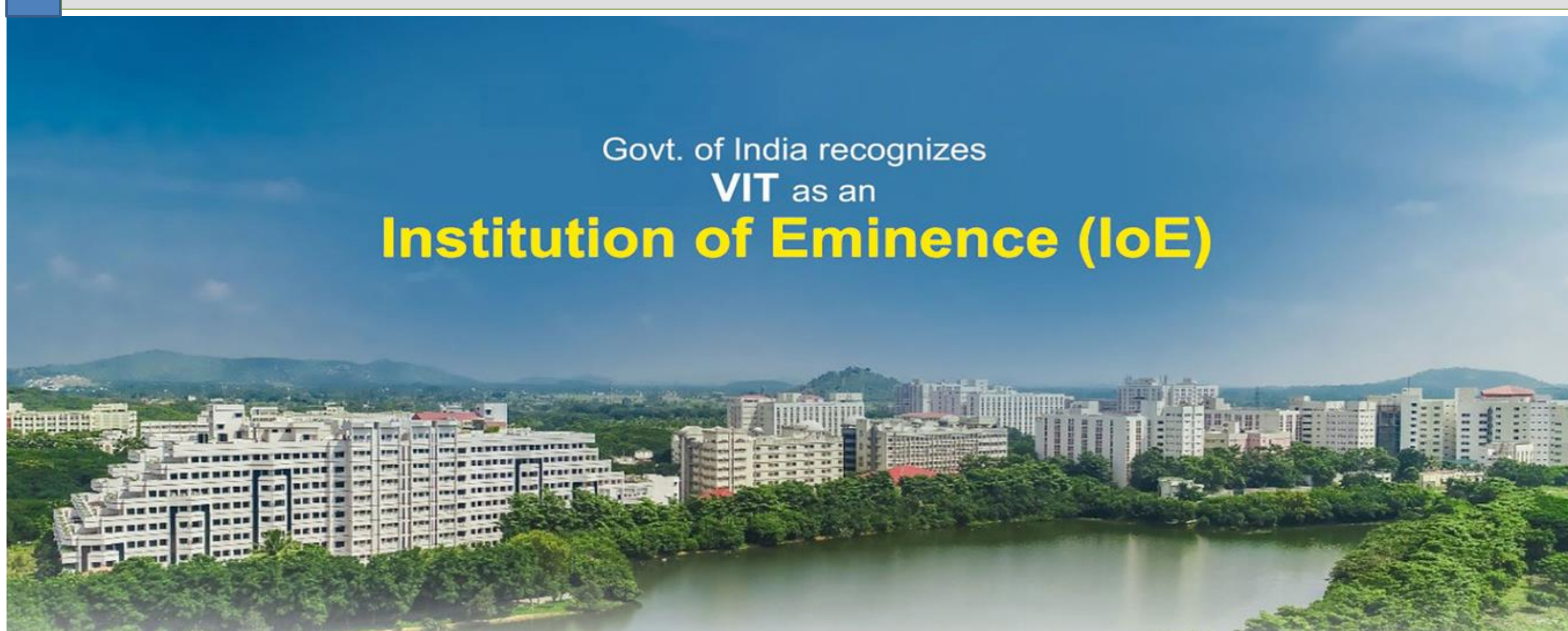
<b>Dr. Rakeshwar Bandichhor</b> , Dr. Reddys Lab, Hyderabad	<b>Prof. Surinder Kumar Mehta</b> , Panjab University, Chandigarh
<b>Prof. Vandana Bhalla</b> , GNDU, Amritsar	<b>Prof. Lallan Mishra</b> , BHU, Varanasi
<b>Prof. J. K. Bera</b> , IIT Kanpur, Kanpur	<b>Prof. S. Muthusamy</b> , Bharathidasan University, Tiruchirappalli
<b>Dr. Amitava Das</b> , CSIR-CSMCRI, Bhavnagar	<b>Prof. Amiya Kumar Panda</b> , Vidyasagar University, Midnapore
<b>Prof. Swagata Dasgupta</b> , IIT Kharagpur, Kharagpur	<b>Prof. T. Punniyamurthy</b> , IIT Guwahati, Guwahati
<b>Prof. Ramesh C. Deka</b> , Tezpur University, Tezpur	<b>Prof. N. G. Ramesh</b> , IIT Delhi, New Delhi
<b>Prof. K. George Thomas</b> , IISER Thiruvananthapuram	<b>Prof. Anunay Samanta</b> , University of Hyderabad, Hyderabad
<b>Prof. Ashutosh Ghosh</b> , Calcutta University, Kolkata	<b>Prof. G. Sekar</b> , IIT Madras, Chennai
<b>Prof. Pradyut Ghosh</b> , IACS Kolkata	<b>Prof. A. Srinivasan</b> , NISER, Bhubaneswar
<b>Prof. Prasenjit Ghosh</b> , IIT Bombay, Mumbai	<b>Dr. P. Sujatha Devi</b> , CSIR-CGCRI, Kolkata
<b>Prof. Neelima Gupta</b> , University of Rajasthan, Jaipur	<b>Prof. V. V. Sureshbabu</b> , Bangalore University, Bangalore
<b>Prof. Rama Kant</b> , University of Delhi, Delhi	<b>Prof. Anirban Misra</b> , University of North Bengal, Siliguri
	<b>Prof. Sandeep Verma</b> , IIT Kanpur, Kanpur

### About the Symposia

The 26<sup>th</sup> CRSI National Symposium in Chemistry (CRSI NSC-26) will be held in VIT Vellore during Feb. 7-9, 2020 under the auspices of the Chemical Research Society of India (CRSI). On behalf of the organizing committee, we cordially invite you to attend this prestigious symposium. The symposium includes medal lectures and poster presentations apart from special lectures by eminent chemists from India and abroad. The symposium aims to promote exchange of ideas and creates an opportunity for collaborative endeavors in frontier interdisciplinary areas. We look forward to your participation and presence in the symposium. In addition, a one-day CRSI-RSC joint symposium will be held on February 6, 2020 at VIT Vellore.

### About VIT, Vellore

Vellore Institute of Technology (VIT) was founded in 1984, as Vellore Engineering College (VEC) by Dr. G. Viswanathan, the Chancellor. VIT's academic excellence has attracted students from all the states of the country and more than 53 foreign countries. VIT has extensive international collaboration through more than 250 active MoUs with reputed Universities. Recently, Govt. of India recognizes VIT as an Institution of Eminence (IoE). FFCS (Fully flexible credit system), PBL (project based learning), fully digitized academic portals provide students futuristic education and plenty of opportunities for career growth. The department of Chemistry has been maintaining quality in teaching and research, currently 63 faculty members on roll. It publishes about 250 quality SCOPUS indexed publications in peer reviewed journals. It has expertise in many frontier areas of chemistry and is well equipped with necessary equipment. The Department is DST-FIST recognized.



Govt. of India recognizes  
**VIT** as an

**Institution of Eminence (IoE)**

### Organizing Committee

#### CHIEF PATRON

**Dr. G. Viswanathan**  
Chancellor

#### PATRONS

**Mr. Sankar Viswanathan**  
Vice President  
**Dr. Sekar Viswanathan**  
Vice President  
**Mr. G V Selvam**  
Vice President  
**Dr. Sandhya Pentareddy**  
Executive Director  
**Ms. Kadhambari S. Viswanathan**  
Assistant Vice President

#### ADVISORS

**Dr. Anand A Samuel**  
Vice Chancellor  
**Dr. S. Narayanan**  
Pro- Vice Chancellor  
**Dr. K. Sathyanarayanan**  
Registrar

#### CONFERENCE CHAIR

**Dr A. Mary Saral**  
Dean

#### CONVENER

**Dr. R. Vijayaraghavan**  
**ORGANIZING SECRETARIES**  
**Dr. Kaushik Chanda**  
**Dr. Priyanka Paira**

The participants are requested to complete online registration and pay the registration fee via the online portal. The registration fee is non-refundable and it includes full participation, conference kit, lunch/dinner/refreshments. Although there is no separate registration fee for attending the CRSI-RSC Joint Symposium on February 6, 2020, the interested participants must select this option during the registration.

### Abstract

Interested participants may submit an abstract of their original research work for poster presentation. Abstract template, the process of abstract submission, and poster size can be obtained from the conference website.

### Accommodation

All the speakers will be provided accommodation. For other delegates, information regarding accommodation can be obtained from the conference website.

### \*IMPORTANT NOTE

The registration fee of Rs. 2000 is applicable to only those students who are currently members of the CRSI. It is mandatory for the students to become a Life Member of CRSI to attend meetings and/ or present posters. If a student becomes a Life Member of the CRSI after paying Rs. 5000 (discounted fee), his/her registration fee will be waived for CRSI NSC-26, and for him/her only the accommodation fee of Rs. 500 per student per night will have to be paid. For more information about the CRSI membership, please visit [www.crsi-india.org](http://www.crsi-india.org). A Life time 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.

*\*Outstation student participants will be provided accommodation in suitable places on payment of Rs. 500 per student per night (sharing basis) along with the registration fee to avail this facility.*

### Credentials of VIT



Govt. of India has recognized VIT, Vellore as an Institution of Eminence (IoE)



NIRF(National Institutional Ranking Framework)  
No.18 in Engineering Institution-2019  
No.19 in University -2019  
No.46 in Management Institution-2019



NAAC (National Assessment and Accreditation Council)  
Accredited in 2015-A grade  
Accredited in 2009  
Completed 3 Cycles of Accreditation



UGC graded autonomy in 2018  
Government endorsed recognition for VIT



The subject Chemistry of VIT is ranked at 550 in world in QS subject ranking

### Conference Website & Email Address

<https://vit.ac.in/CRSI> [crsi2020vit@gmail.com](mailto:crsi2020vit@gmail.com)  
<https://www.crsi-india.org> <http://www.vit.ac.in>

### Registration Fee

Delegate (Industry)	Rs. 10,000/-
Delegate (Academic)	Rs. 6,000/-
Life member, CRSI	Rs. 4,000/-
Students (Life Members-Old)	Rs. 2,000/-
Students (Life Members-New)	Rs. 0*#
Accompanying person	Rs. 3,000/-
Foreign Delegate	US \$ 200

### Important Dates

Symposium Feb. 06-09, 2020

Last date for Registration & Fee Payment:  
Jan. 25, 2020

Last date for Abstract Submission: Dec. 31, 2019

### 14<sup>th</sup> CRSI-RSC Joint Symposium on February 06, 2020



**26<sup>th</sup> CRSI National Symposium in Chemistry (NSC-26) Programme**  
 Friday, 7 February 2020, Venue- Ambedkar Auditorium, Technology  
 Tower, Ground Floor, 9.30 to 18.05

<b>08:30 - 09:30</b>	Registration
<b>SESSION I: INAUGURATION AND PRESIDENTIAL ADDRESS</b>	
<b>09:30 - 10:30</b>	
<b>10:30 - 11:00</b>	<b>HIGH TEA</b>
<b>SESSION II: SPECIAL LECTURES</b> <span style="float: right;"><b>CHAIRPERSON: V. Krishnan</b></span>	
<b>11:00 - 11:45</b>	<b>Animesh Chakravorty Endowment Lecture</b> <b>A. S. Borovik</b> , University of California-Irvine, USA Molecular Complexity and Inorganic Chemistry: Utilizing Non-Covalent Interactions to Control Function
<b>11:45 - 12:15</b>	<b>CRSI Medal Lecture</b> <b>Arun Yethiraj</b> , University of Wisconsin-Madison, USA Polymers in ionic liquids
<b>12:15 - 12:45</b>	<b>C. N. R. Rao National Prize for Chemical Research</b> <b>G. U. Kulkarni</b> , JNCASR, Bangalore Au decahedra: Unusual nucleus for unconventional lattices
<b>12:45 - 16:00</b>	<b>LUNCH AND POSTER SESSION I, Foodys</b> <b>Posters No. 1 to 61</b>
<b>14:00 - 15:00</b>	<b>COUNCIL MEETING (Members only), Board Room, MGR Block</b>
<b>15:30 - 16:00</b>	<b>TEA/COFFEE</b>
<b>SESSION III: MEDAL AND SPECIAL LECTURES</b> <span style="float: right;"><b>CHAIRPERSON: S. Chandrasekaran</b></span>	
<b>16:00 - 16:45</b>	<b>CRSI Honorary Fellowship Lecture</b> <b>Sunney I. Chan</b> , Academia Sinica, Taiwan Taming Methane: A catalyst for Efficient and Selective Methane Oxidation under Ambient Conditions
<b>16:45 - 17:05</b>	<b>Bronze Medal Lecture</b> <b>Ranjani Viswanatha</b> , JNCASR, Bangalore Mn emission: Energy transfer or Charge transfer
<b>17:05 - 17:25</b>	<b>Bronze Medal Lecture</b> <b>Manmohan Kapur</b> , IISER, Bhopal Transition-metal-catalyzed Distal and Remote Functionalizations
<b>17:25 - 17:45</b>	<b>Bronze Medal Lecture</b> <b>Rajakumar Balla</b> , IIT Madras Measurement of absorption cross-sections and kinetics of radicals relevant to the Earth's atmosphere using Cavity Ring Down Spectroscopy

<b>17:45 – 18:05</b>	<b>Bronze Medal Lecture</b> S. G. Srivatsan, IISER, Pune Probing Mood (Structure) Swings of Non-Canonical Nucleic Acid Motifs
<b>18:15 – 19:15</b>	<b>CULTURAL PROGRAM, Anna Auditorium</b>
<b>19:30 – 21:30</b>	<b>DINNER, Foodys</b>

**Saturday, 8 February 2020, Venue: Gallery -2, Tech, Tower, 2<sup>nd</sup> Floor**  
**9.30 to 18.15**

<b>SESSION IV: SPECIAL/MEDAL LECTURES</b>		<b>CHAIRPERSON: Sourav Pal</b>
<b>09:30 – 10:15</b>	<b>C. N. R. Rao Award Lecture</b>  Richard Catlow, University College London, UK Modeling, Synchrotron Radiation and Neutron Scattering Studies of Structure, Dynamics and Reactivity in Catalytic Systems	
<b>10:15 - 10:45</b>	<b>Silver Medal Lecture</b>  K. Vijayamohanan Pillai, IISER, Tirupati Phosphorene Quantum Dots: Electrochemical Preparation, Doping and Possible Applications	
<b>10:45 – 11:15</b>	<b>TEA/COFFEE</b>	
<b>SESSION V: MEDAL LECTURES</b>		<b>CHAIRPERSON: R. N. Mukherjee</b>
<b>11.15 – 12.00</b>	<b>Mizushima - Raman Lecture</b>  Tahei Tahara, Riken, Wako, Japan Time-Domain Raman Spectroscopy and Its Application to Ultrafast Photochemical / Photobiological Reactions	
<b>12.00 – 12.30</b>	<b>CRSI Medal Lecture</b>  Jagadese J. Vittal, National University of Singapore, Singapore My Journey with Crystals under UV Light and beyond	
<b>12.30 – 13.00</b>	<b>Third Charusita Chakravarty Memorial Lecture</b>  Srabani Taraphder, IIT Kharagpur Reaction Coordinate, Free Energy and Kinetics in an Enzyme Catalysed Proton Transfer Reaction	
<b>13:00 – 16:00</b>	<b>LUNCH AND POSTER SESSION II Venue – Foodys</b> Poster No. 62-122	
<b>15:30 – 16:00</b>	<b>TEA/COFFEE</b>	

<b>SESSION VI: MEDAL LECTURES</b>		<b>CHAIRPERSON: K. P. Kaliappan</b>
<b>16:00- 16:30</b>	<b>Silver Medal Lecture</b> <b>Subrata Ghosh</b> , IACS, Kolkata Natural Products Synthesis – Some Fascinating Aspects	
<b>16:30 – 16:50</b>	<b>Bronze Medal Lecture</b> <b>Mahesh Hariharan</b> , IISER, Trivandrum Ultrafast Excited State Dynamics of Twisted Aromatics	
<b>16:50 – 17:10</b>	<b>Bronze Medal Lecture</b> <b>Ashwani Kumar Tiwari</b> , IISER, Kolkata Effects of Mode-Mode Coupling on the Dissociation Dynamics of H <sub>2</sub> O and CH <sub>4</sub> on Metal Surfaces	
<b>SESSION VII: LIFETIME ACHIEVEMENT AWARD LECTURE CHAIRPERSON: N. Sathyamurthy</b>		
<b>17:10 – 18.00</b>	<b>T. Ramasami</b> , CSIR-CLRI Chennai A Story of an evolution of a chemist	
<b>18:00 – 19:15</b>	<b>General Body Meeting and Presentation of Medals/Awards</b>	
<b>19:30 – 21:30</b>	<b>CONFERENCE DINNER, Foodys &amp; Greeno</b>	

**Sunday, 9 February 2020, Gallery -2, Tech, Tower, 2<sup>nd</sup> Floor, 9.30 to 13.15**

<b>SESSION VIII: MEDAL LECTURES</b>		<b>CHAIRPERSON: G. Sekar</b>
<b>09:30 – 09:50</b>	<b>Bronze Medal Lecture</b> <b>E. Balaraman</b> , IISER, Tirupati Non-noble metal catalysis: Applications in dehydrogenation and related reactions	
<b>09:50 – 10:10</b>	<b>Bronze Medal Lecture</b> <b>Gouriprasanna Roy</b> , IIT Tirupati Biomimetic Studies to understand the mechanism of Hg–C bond protonolysis by mercury-resistant Organomercurial Lyase MerB	
<b>10:10 – 10:30</b>	<b>Bronze Medal Lecture</b> <b>Santanu Kumar Pal</b> , IISER, Mohali Highly Efficient Ambipolar Charge Transport in Semiconducting Discotic Liquid Crystals	
<b>10:30 – 11:00</b>	<b>TEA/COFFEE</b>	

<b>SESSION IX: THEMATIC MINI-SYMPOSIUM</b>		<b>CHAIRPERSON: S. Muthusamy</b>
<b>11:00 - 11:30</b>	<b>Invited Lecture</b> <b>R. Vijayaraghavan</b> , VIT, Vellore Development of Sensors & Proto type set up for Fruit Ripening Application	
<b>11:30 - 11:50</b>	<b>Invited Lecture</b> <b>Hongdoo Kim</b> , Adjunct Faculty, VIT, Vellore Hybrid Piezocapacitive / Piezoelectric Sensor Based on Electro spun Nanowire Web	
<b>11:50 - 12:10</b>	<b>Invited Lecture</b> <b>A. Senthilkumar</b> , VIT, Vellore Redox Active Organic Molecule Functionalized Carbon Nanomaterials for Elegant Electrochemical Immuno-sensing of Shrimp-Virus	
<b>12:10 - 12:25</b>	<b>Invited Lecture</b> <b>S. Senthilkumar</b> , VIT, Vellore Rationally Designed Ionic Liquids for Electrochemical Sensing	
<b>12:25 - 12:40</b>	<b>Invited Lecture</b> <b>S. K. Ashok Kumar</b> , VIT, Vellore New Thorium (IV) Selective Sensors	
<b>12:40 - 12:55</b>	<b>Invited Lecture</b> <b>S. Sarveswari</b> , VIT, Vellore Organic Small Molecules as Chemosensors	
<b>12:55 - 13:15</b>	<b>Concluding Remarks</b>	
<b>13:15 - 14:15</b>	<b>LUNCH AND DEPARTURE, Basketball court, Opposite to Tech Tower</b>	