



# ASSOCIATION OF CHEMISTRY TEACHERS

## Newsletter

ISSUE : 33 SEPTEMBER - DECEMBER 2025



Promoting Excellence in Chemistry Education

# Association of Chemistry Teachers Newsletter, September - December 2025

## Contents of the Newsletter : Issue - 33

1.	From Editorial Desk and Editorial Board Members	02
2.	Honorary Members of ACT	03
3.	Report of Activities of ACT	
i)	National Convention of Chemistry Teachers [NCCT- 2025]	04
ii)	ACT Celebrates 25th Anniversary with two - days National Training-cum-Workshop at FFDC, Kannauj	13
iii)	Report of International Conference on New Dimensions in Chemical Sciences and Education	15
iv)	One day Seminar on Digital and Visual - Supported Chemistry Education	17
v)	Report on National Chemistry Day	19
vi)	Report on National Seminar on "Chemistry for a Healthier Life and Greener Planet"	20
vii)	Report on State - Level 3 - Day JAM/CUET workshop	21
viii)	Report on International Conference	23
ix)	Report : Nirantar 2025	26
x)	Report on Industrial Tour to Kalajyothi Process	28
xi)	Report on USA International Seminar	29
xii)	International Conference : SMILE-2025	32
4.	Piezoelectric Nanomaterials: ZnO, BaTiO <sub>3</sub> and Beyond	34
5.	Academic Participation of ACT EC Members	38
6.	Views, News and more ....	40
7.	List of newly added Life Members of ACT	41



## *From Editorial Desk*

### **Prof. Wasudeo Gurnule**

Chief Editor  
Vice President, ACT West Zone  
Formerly Kamla Nehru Mahavidyalaya,  
Nagpur-440024, Maharashtra.



The **Editorial Board of the ACT Newsletter (Issue 33)** played a vital role in planning, reviewing, and shaping the content of this issue. The Board ensured that the articles maintain high academic standards, clarity, and relevance to the chemistry community.

Wishing you in advance the entire fraternity of ACT, a Merry Christmas, a very happy, healthy and prosperous New Year 2026. The present Editorial Board has put in its bit of efforts, to make the newsletter as attractive and informative as possible. The Editorial Board's collective efforts have helped strengthen the quality of the newsletter and uphold ACT's commitment to promoting chemical sciences and professional excellence. We are bringing the issue of the newsletter with the activities of ACT from different zones, articles of current topic, scientific news and reports of International and National activities. We have also included the report of NCCT-2025 held at Samrat Vikramaditya Vishwavidyalaya, Ujjain and brief profiles of ACT-2025 award winners.

I take this opportunity to say many, many thanks to all my Editorial Board Members for their whole hearted co-operation extended to me.

### **Members of Editorial Board**

- ▶ **Dr. Mannam Krishnamurthy**, Varsity Education Management Limited, Hyderabad
- ▶ **Prof. Ramesh Yamgar**, Patkar-Varde College, Goregaon, Mumbai
- ▶ **Prof. Brijesh Pare**, Govt. Madhav Science College, Ujjain
- ▶ **Prof. Damodar V. Prabhu**, Wilson College, Mumbai
- ▶ **Prof. M. Swaminathan**, KARE, Krishnankoil
- ▶ **Prof. Subhash P. Singh**, A.N. College, Patna
- ▶ **Prof. Hemant Pande**, Formerly Hislop College, Nagpur
- ▶ **Prof. Raakhi Gupta**, IIS (deemed to be University) Jaipur
- ▶ **Dr. Umesh C. Jain**, PDEU, Gandhinagar, Gujrat
- ▶ **Prof. Gitimoni Deka**, Rangia College, Rangia
- ▶ **Dr. Purabi Sarmah**, Nalbari College, Nalbari, Assam
- ▶ **Prof. Helen Kavitha**, SRM Institute of Science and Technology, Chennai
- ▶ **Prof. Vijay P. Singh**, N.C.E.R.T. New Delhi
- ▶ **Prof. Sudesh Ghoderao**, RNC Arts, JDB Commerce and NSC Science College,  
Nashik Road, Nashik, Maharashtra
- ▶ **Prof. Amar Shrivastava**, Hari Sahai P.G. College, Kanpur

## Honorary Members of ACT

We have great pleasure in bringing the updated list of honorary members of Association of Chemistry Teachers, who are sources of inspiration, guidance and support in activities of ACT.

**The editorial board of ACT News Letter is proud of the academic achievements of these legendary honorary members.**

**Bharat Ratna Prof. C.N.R. Rao, FRS**

National Research Professor : Linus Pauling Research Professor,  
Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bengaluru - 560 064  
E-mail : cnrrao@jncasr.ac.in



**Padma Vibhushan Prof. M.M. Sharma, FRS**

Former Director, Institute of Chemical Technology, Mumbai - 440 019.  
2/3, Jaswant Baug, V.N. Purav Marg, Chembur, Mumbai - 400 071  
E-mail : profmmsharma@gmail.com



**Padma Vibhushan Dr. R.A. Mashelkar, FRS**

CSIR Bhatnagar Fellow; Former Director General, CSIR, New Delhi.  
President, Global Research Alliance, National Chemical Laboratory, Pune - 411 008.



**Dr. Nitya Anand**

Former Director, CSIR-Central Drug Research Institute, Lucknow.  
B-62, Nirala Nagar, Lucknow - 226 020  
E-mail : nityaanand1925@gmail.com



**Prof. R.S. Mali**

Former Vice-Chancellor, North Maharashtra University, Jalgaon.  
B-2, Surajbun Housing Society, Aundh Road, Pune - 411 007.  
E-mail : rsmali@rediffmail.com



**Prof. S. Jayarama Reddy**

Former Vice-Chancellor, S.V. University, Tirupati; Chancellor, SCSSV Mahavidyalaya, Kanchi  
201, Ameya Towers, Street No. 12, Tarnaka, Hyderabad - 500 017.  
E-mail : profsir@gmail.com



**Padma Shri Prof. Jai P. Mittal**

Former Director, Chemistry - Isotope Group, BARC, Mumbai - 400 085.  
Chairman, Academic Board, UM-DAE Centre for Excellence in Basic Sciences,  
University of Mumbai, Kalina, Mumbai - 400 098  
E-mail : mittaljp2003@yahoo.co.in



**Prof. Mihir K. Chaudhuri**

Former Vice-Chancellor, Tezpur University, Tezpur.  
Advisor, Education Department of Government of Assam, Gawahati - 781 006  
E-mail : chaudhurimihirk@gmail.com; mkc@tezu.ernet.in



**Padma Shri Prof. G. D. Yadav,**

National Science Chair, SERB, New Delhi  
Emeritus Professor of Eminence, Institute of Technology, Mumbai  
Former Vice Chancellor, Institute of Technology, Mumbai  
Email : [gdyadav@gmail.com](mailto:gdyadav@gmail.com)

**Prof. A. K. Bakhshi**

Chairman, National Resource Centre for Chemistry, MoE, GOI  
Chairman, Guru Angad Dev Teaching Learning Centre for e-Learning,  
SGTB Khalsa College, University of Delhi, Delhi  
Founder Vice Chancellor, PDM University, Bahadurgarh, Haryana  
Email : [akbakhshi@yahoo.com](mailto:akbakhshi@yahoo.com)

**Prof. John Warner**

Father of Green Chemistry and Coauthor of 12 Principles of Green Chemistry with  
Prof Paul Anastas President and Chief Technology Office, Warner-Babcock Institute for  
Chief Chemistry President, Beyond Benign  
Distinguished Professor of Green Chemistry, Monash University, USA  
Email : [john\\_warner@uml.edu](mailto:john_warner@uml.edu)



## Reports of Activities of ACT

### International Conference on Breakthrough Innovations in Chemical & Sustainable Sciences: Research and Education [BICSS- 2025] and National Convention of Chemistry Teachers [NCCT- 2025]

The three-day International Conference on “Breakthrough Innovations in Chemical & Sustainable Sciences: Research and Education” was successfully organised from Thursday, 13-15<sup>th</sup> November 2025.

This conference, organized in collaboration with the Association of Chemistry Teachers (ACT), was convened with the critical objective of bridging the gap between cutting-edge chemical research and the global imperative for sustainable development and educational innovation. The conference attracted a diverse gathering of 350 participants, comprising researchers, scientists, academicians, scholars, and students from institutions across India and overseas. Lively interactions and meaningful exchanges among the participants created an intellectually stimulating atmosphere, encouraging the sharing of knowledge, fostering interdisciplinary dialogue, and opening avenues for collaboration while offering broader global perspectives on contemporary developments in chemical sciences and education.

**Organizers & Sponsors**

The conference was organized by School of Studies in Chemistry and Biochemistry, Samrat Vikramaditya Vishwavidyalaya, Ujjain and Association of Chemistry Teachers (ACT) India and was sponsored by Anusandhan National Research Foundation (ANRF).

**Global Participation**

The conference was graced by International delegates from Malaysia, Germany, and

the United States of America, whose presence significantly enriched the academic deliberations. Their expert lectures and interactions provided valuable global perspectives on contemporary research trends, innovative methodologies, and sustainable practices in chemical sciences.

## Conference Highlights and Key Takeaways

### Day 1: Foundations and Future Directions

The conference commenced with a grand **Inaugural Ceremony** and the presentation of the ACT Awards. The tone for the entire event was powerfully set by the Keynote Address delivered by **Padma Shri Prof. Ganapati D. Yadav**.

A highly engaged **Panel Discussion** followed, centered on "The Stockholm Declaration on Chemistry for the Future," moderated by **Dr. Brijesh Pare**.

#### Plenary Lectures :

- **Dr. Vimal Rahr** focused on "Innovation and Sustainability in Chemistry Curriculum," stressing the need for Outcome-Based Education.
- **Dr. Upakarasamy Lourderaj** delivered into technical frontiers, discussing "Unconventional Reaction Pathways in Nucleophilic Substitution Reactions."



Hon'ble guest present on the dais during inauguration of NCCT-2025 at Vikram University, Ujjain



Lightening of Lamp by Hon'ble guest of inauguration of NCCT-2025



Prof. D. V. Prabhu, President of ACT addressing the gathering during inauguration of NCCT-2025



Prof. Ramesh Yamgar, General Secretary, of ACT delivering speech during inauguration of NCCT-2025

## Panel Discussion on Stockholm Declaration :

During the NCCT-2025 conference, a panel discussion on the **Stockholm Declaration** was successfully organized, focusing on its relevance to modern chemical sciences and sustainable development. The session was moderated by **Prof. Brijesh Pare**, who guided the discussion with insightful questions and ensured active engagement among the panellists.

The distinguished panel included **Padmashree Prof. G. D. Yadav**, Director ICT Mumbai, **Dr. Amrit Mitra** Rani Rashmoni Green University, **Prof. W. B. Gurnule**, RTM Nagpur University, **Dr. Rajnish Mishra**, IIT Indore, **Prof. Arpan Bhardvaj**, Hon'ble VC of Vikram University, Ujjain and **Dr. Subarna Sivapalan**, Malaysia. Each expert shared their perspectives on the importance of, environmental responsibility, sustainable chemical practices, and global cooperation in addressing environmental challenges.

The discussion highlighted the continuing significance of the Stockholm Declaration in guiding environmental policies, promoting green chemistry, and encouraging responsible scientific innovation. The session concluded with an interactive exchange of ideas, emphasizing the need for collaborative efforts among researchers, policymakers, and industry to achieve sustainable development goals. The Stockholm Declaration is a landmark document in environmental history, adopted during the United Nations Conference on the Human Environment held in Stockholm. It laid the foundation for modern environmental protection and sustainable development.

From a **chemistry perspective**, the declaration is highly significant because it emphasizes the responsible use of chemical substances and technologies. It highlights that scientific and chemical advancements should be used to improve human well-being while minimizing environmental damage. The declaration calls for controlling pollution caused by hazardous chemicals, industrial waste, and toxic emissions, which directly relates to fields like environmental chemistry and green chemistry. It also stresses the need for research, monitoring, and regulation of chemical pollutants in air, water, and soil. This has influenced the development of safer chemical processes, waste management practices, and international agreements on hazardous substances.



Moderator Prof. Brijesh Pare guiding the audience



Panel Members on the dais

## Day 2: Education and Technical Frontiers

- **Prof. A. K. Bakhshi**, addressed the crucial topic of "Redesigning Chemistry Education in India for 21st-Century Learning Needs"
- **Dr. Subarna Sivapalan**, brought an international perspective with a lecture on "Greening the Curriculum: From a Whole of Institution Approach to a Whole of System Approach" providing a blueprint for holistic educational change.
- **Dr. Debayan Sarkar**, detailed cutting-edge synthetic methodologies in his talk on the "Rise of Tribromide Tools"
- **Prof. G. D. Yadav's** engaging "Interaction with Teachers and Students."
- **Dr. Ajay Bissesur** from South Africa, who presented innovative techniques for the "Degradative Beneficiation of Waste Oils"
- **Dr. R. M. Jugade's** address was on "Tailoring Chitosan for Water Detoxification" a direct application of materials science to environmental solutions.

Both the days concluded with two dedicated **Oral Sessions with 50 research papers** and a vibrant **Poster Session with 75 posters**, showcasing the high quality of research from over 150 presenters. They provided valuable platforms for young researchers to share and discuss their latest findings in chemical sciences areas.

A highly inspiring segment of the final day was the dedicated outreach and interaction program for local school students and teachers. This session truly embodied the conference's commitment to scientific literacy and grassroots engagement.

The program was anchored by an extensive **Students and Teachers Interaction with Padmashree Prof. Ganapati D. Yadav**. His presence was deeply inspiring, offering guidance and motivation to future generations of scientists and educators.

**For School Students:** The activities focused on making chemistry accessible and fun.

- **Dr. Nikhilesh Asan Vigyan (BARC)** captivated the young audience with his ingenious "**Periodic Table through Card**" activity, simplifying complex concepts through play.
- **Prof. Amrit Mitra** (Rani Rashmoni Green University) shared valuable "**Academic Insights and Pedagogical Perspectives in Chemistry Education.**"

**For Teachers:** The sessions provided practical tools and innovative methodologies for classroom use.

- **Dr. Ram Babu Pareek** (RIE, Mysuru) introduced "**Small-Scale Experiments: An Innovative Approach,**" offering sustainable and low-cost alternatives for laboratory teaching.
- **Prof. Hemant Pandey** emphasized the critical role of "**Experiential learning for a better future,**" focusing on hands-on pedagogy.
- **Prof. V. P. Singh (NCERT)** also contributed valuable expertise on integrating educational kits and modern science teaching strategies.

This dedicated outreach underscores the conference's commitment to translating high-level research into effective, accessible learning at the school level.



**Felicitation of Prof. A. K. Bakhshi by hands of Prof. G. D. Yadav and Vice Chancellor of the University, Prof. Arpan Bhardwaj**



**Dr. Subarna Sivapalan, Malaysia delivering Invited Talk**



**Dr. Nikhilesh Asan Vigyan (BARC) captivated the young audience with his ingenious "Periodic Table through Card" activity, simplifying complex concepts through play to student.**



**Prof. Amrit Mitra shared valuable Academic Insights and Pedagogical Perspectives in Chemistry Education to school student**



**Group Photo with school students**

## Day 3: Advanced Materials and Computational Insight

The final day expanded the scope to materials science, entrepreneurship, and computational chemistry.

- **Dr. Annu Sharma** from Kurukshetra University presented research on "**Flexible Photochromic Materials for Energy Efficient Buildings,**" demonstrating the practical application of chemical science to sustainable infrastructure and energy conservation.
- **Prof. Sreekanth B Jonnalagadda** highlighted the importance of "**Green Synthesis: Novel Nanocomposites and Mixed Oxide Materials as Reusable Catalysts.**"
- **Dr. Shrilakshmi Desiraju** offered a crucial perspective on commercialization in her talk on "**Bio entrepreneurship: Importance of IPR in technology - Commercialization.**"
- **Dr. Anant D. Kulkarni** provided deep insight into the theoretical backbone of chemistry with his presentation on "**Computational and Quantum Chemistry: An Ultimate Approach to Understand Physico-Chemical Phenomena.**"
- **Prof. Pawan Kumar Sharma** (Kurukshetra University), enriched the program with his thought-provoking presentation on "**Bharatiya Gyan Parampara: Timeless Wisdom for Modern Minds,**" emphasizing the integration of ancient knowledge systems with contemporary scientific inquiry

### Oral presentation-

#### Section A:

**First Position - Isha Sharma**, P.G. student, Institute for Excellence in Higher education, Bhopal

#### Section B:

**First position- Harish Kumar**, Prof. & Head, Central University of Haryana, Mahendragarh.

**Second Position- Kartikey Mishra**, School of Studies in Microbiology & Food Safety, Samrat Vikramaditya Vishwavidyalaya, Ujjain

#### Section C:

**First Position - Dr. Bijaneswar Mondal**, Asst. Prof. Guru Ghasidas Vishwavidyalaya, Bilaspur

**Second Position- Narendra Joshi**, Associate Prof. Arts, Commerce & Science College, Bodwad

#### Section D:

**First position:- Aniruddha Balkrishna Patil**, Asst. Prof., Maharshi Dayanand College, Mumbai

**Second position- Aruna Varma**, School of Studies in Chemistry & Biochemistry, Samrat Vikramaditya Vishwavidyalaya, Ujjain

**Second position- Sarabjot Makkad**, Madhav Science College, Ujjain.

### Poster presentation:

#### Section A:

**First position - Vijendra Singh Solanki**, Dept. of Chemistry, IPS Academy, Indore

### Section B:

**First position-** **Amrit Krishna Maitra**, Dept. of Chemistry, Govt. General Degree College, Googly West Bengal

**Second Position - Ms. Chanda**, Dr. Harisingh Gour University, Sagar

### Section C:

**First position - Hemant Khanolkar**, Dept. of Chemistry, Fr Conceisco Engineering College, Mumbai

**Second Position-** *Komal M. Jamkhande*, Dept. of Chemistry, Nagpur University Maharashtra.

### Section D:

**First position-** **Ravina Pathare**, Wilson College, Mumbai

**Second position-** **Vaishnavi Gomase**, Dept. of Chemistry, R.T.M. Nagpur University, Nagpur

Collectively, the sessions have provided a comprehensive overview of the current landscape of chemical research—spanning sustainability, pedagogical reforms, advanced synthesis, green materials, and computational modelling.

This conference has successfully fulfilled its objective of fostering global scientific exchange. Over three days, we have witnessed the power of collaboration, with delegates from various countries engaging in meaningful dialogue, laying the foundation for future joint ventures and research partnerships.



Oral and Poster paper presentation award ceremony in valedictory programme

## ACT Award Ceremony in NCCT-2025

Prof. D. V. Prabhu introduced the ACT awards and **Padma Shri Prof. Ganapati D. Yadav**, Director of ICT Mumbai honoured the ACT Awardees under the Following categories:

1. **ACT Shri Anupam Sinha Best Chemistry Teacher Award (Undergraduate level)** : Dr. Manash Protim Hazarika, of Darrang College, Tezpur, Assam
2. **ACT Best Woman Chemistry Teacher Award** : Dr. N. Radha, of Alagappa University, Alagappa Government Arts College, Karaikudi, Tamil Nadu
3. **ACT Dr. Uma Sai Prakash Chemistry Popularisation Award** : Dr. Sangita Sharma, of Hem. North Gujarat University, Patan, Gujarat
4. **ACT Prof. Shradha Sinha Best Woman Chemistry Teacher (only from College level)** : Prof. V. Anuradha, of Acharya Nagarjuna University, Vignan Degree and PG College, Guntur, AP

5. **ACT Prof. Pinki B. Punjabi Award for Outstanding Contribution to Research in Chemical Sciences** : Prof. Vinod Kumar Tiwari, of Institute of Science, Banaras Hindu University, Varanasi.
6. **ACT Prof. Lallan Singh Award for Best PG Chemistry Teacher(State Universities)** : Prof. V. Padmavati, of Sri Venkateswara University, Tirupati
7. **ACT Prof. Bhupendra Sahai Saxena Award for Best PG Chemistry Teacher** : Prof. Hirak Chakraborty, of Sambalpur University, Burla, Odisha.
8. **ACT Prof. P. R. Singh Award for Outstanding Contribution to Chemistry Education** : Prof. Harish Kumar, of Central University of Haryana, Mahendragarh, Haryana
9. **ACT Best Young Chemistry Teacher Award (below 45 years)** : Dr Pournima Talele, of Shri Guru Gobind Singhji Institute of Engineering and Technology, Nanded.
10. **ACT Life Time Achievement Award** : Prof. R. C. Maurya, Former Head, Department of Chemistry and Pharmacy, Rani Durgavati University, Jabalpur.



ACT Awards Ceremony during the inauguration of NCCT - 2025

## ACT Executive Committee (EC) Meeting

A special ACT EC meeting was held which was attended by concerned office bearers and then regular ACT EC meeting was held at Vikram University, Ujjain. The meeting was organized as part of ongoing academic collaborations and institutional activities in chemistry education. The meeting was attended by key ACT office bearers and executive members, including:

- President and General Secretary
- Executive committee members from different regions
- Faculty members and representatives from Vikram University



ACT EC meeting at Vikram University, Ujjain

## ACT General Body Meeting

The Annual General Meeting (AGM) of the Association of Chemistry Teachers was held at Vikram University, Ujjain, bringing together chemistry educators, researchers, and academic leaders from various institutions across the country. The gathering reflected active participation from the academic community.

The meeting aimed to review the activities of the Association over the past year, discuss future plans, and strengthen collaboration among chemistry teachers to enhance the quality of chemistry education in India.



ACT AGM meeting at Vikram University, Ujjain

## ACT Celebrates 25th Anniversary with two days "National Training-cum-Workshop at FFDC, Kannauj"

The Association of Chemistry Teachers (ACT) marked its 25th year of establishment by organizing a National Training-cum-Workshop at the Fragrance and Flavour Development Centre (FFDC), Kannauj from 19-20 Sept. 2025. The event was graced by the esteemed presence of **Dr. Ajit Kumar Shasany**, Director, CSIR-NBRI, Lucknow, as the **Chief Guest**, and **Mr. Pawan Trivedi** as the **Guest of Honour**. The workshop aimed to enhance technical knowledge and promote awareness about the fragrance and flavour industry, particularly focusing on essential oils, attars, and aromatic crop cultivation.

**Dr. S.V. Shukla**, Principal Director, FFDC, delivered a keynote lecture on "*Global Scenarios and Business Career Prospects in Essential Oils, Fragrance and Flavour*". **Mr. Kamlesh Kumar** from FFDC shared valuable insights on "*Prospects of Cultivation of Aromatic Crops and Their Products*", emphasizing opportunities for rural entrepreneurship and sustainable agriculture. **Mr. Gedam Vilas**, also from FFDC, delivered an in-depth session on the "*Fundamentals of Extraction Techniques of Essential Oils, Concentrates, Absolutes, Oleoresins, and Attars*". **Dr. Nadeem Akbar** presented a lecture on "*Quality Assessment of Fragrances and Raw Materials*", highlighting industry standards and testing methods. In a second session, **Dr. S.V. Shukla** also spoke on "*Fundamentals of Creation of Fragrance and Flavour*", offering practical perspectives on formulation techniques.

As part of the experiential learning component, participants visited herbal farms, FFDC laboratories, and renowned fragrance industries in Kannauj, including Pragati Industries. These visits provided a first-hand look at both traditional and modern essential oil extraction methods, such as steam distillation, hydro-distillation, and the production of attars, rose water, and sandalwood oil.

The Chief Guest of the valedictory session was **Mr. Rohit Seth**, President of Sugandh Vyapar, who appreciated the efforts of the organizers and highlighted the importance of traditional fragrance industries in India's cultural and economic landscape. The Guest of Honour, **Dr. D.V. Prabhu**, **President of ACT**, also addressed the gathering in online mode, and congratulated the entire team for the successful organization of the event. He commended the initiative for fostering professional development and knowledge sharing among members of ACT. The event successfully combined academic insight with practical exposure, reinforcing ACT's commitment to education, innovation, and the advancement of India's fragrance and flavour sector. The event was successfully attended by more than twenty ACT members from across India.



**Inaugural session- CHIEF Guest- Prof. Ajit Kumar Shasney, Director-CSIR NBRI, Lucknow (in online mode)**



**Felicitation of ACT-Vice President (North Zone) Prof. Shraddha Sinha by Director FFDC, Shri. S.V. Shukla in inaugural session**



**Visit to Major Extraction Unit-FFDC by ACT members**



**Traditional Essential Oil Extraction Units (DEG BHAPKA) at local Industry in Kannauj**



**Group Photograph post Valedictory Session at FFDC Kannauj**

**Valedictory session- Chief Guest Mr. Rohit Seth -President Sudandh Vyapar Sangh, Delhi, Guest of Honour Prof. D.V. Prabhu (online) President-Association of Chemistry Teacher's, India**



## Report of International Conference on New Dimensions in Chemical Sciences and Education

Association of Chemistry Teachers (ACT), the National registered organization of Chemistry educators of India organized an International Conference on “New Dimensions in Chemical Sciences and Education” on September 11-13, 2025 at Somaiya Vidyavihar University, Mumbai, in celebration of the Silver Jubilee of the Association (2000-2025).

The conference was inaugurated on September 11, 2025 by Prof. Sunil Bhagwat, Director, IISER-Pune and Professor of Chemical Engineering, Institute of Chemical Technology, Mumbai who spoke about the role of Chemistry in shaping young minds. The Guest of Honour, Dr. Kamlesh Bhagwat, Head, R & D, Godrej Agrovet, Mumbai shared the industry perspective on industry and application. Prof. V. N. Rajasekharan Pillai, Vice-Chancellor, Somaiya Vidyavihar University welcomed the delegates. Dr. D. V. Prabhu, President, Association of Chemistry Teachers (India) spoke about the salient features of the conference and Prof. N. Sathyamurthy, Founder President, ACT spoke about the efforts of the Association to promote excellence in Chemistry Education and Research through its numerous activities all over the country.

The technical sessions spread over 3 days were devoted to Green and Sustainable Chemistry, Computational Chemistry, Nanochemistry, Advanced functional materials, Polymer Chemistry, Students' perception of Chemistry through Experiments, Chromatography, Indian Knowledge Systems, Catalysis, Entrepreneurship, Industry-Academic interaction and the diverse activities of IUPAC.

The invited lectures were delivered by eminent scientists and academicians from USA, Mauritius, Singapore, South Africa besides India:

Prof. John Warner, Co-author of 12 Principles of Green Chemistry, President, Technology Green house, USA,

Prof. Suresh Valiyaveetil, National University of Singapore, Singapore,

Prof. Ponnadurai Ramasami, University of Mauritius, Mauritius and University of Johannesburg, South Africa,

Prof. N. Sathyamurthy, IISER-Mohali,

Prof. Uday Maitra, Indian Institute of Science, Bengaluru,

Dr. Satish Pai, President, Deloitte Touche Tohmatsu LLP, South Asia

Prof. Dr. Ajit Datar, Ramnarain Ruia College, Mumbai,

Prof. S. R. Gadre, SP Pune University, Pune,

Prof. Dr. A. K. Tyagi, Homi Bhabha National Institute, BARC, Mumbai,

Prof. S. Sivaram, IISER-Pune,

Principal Dr. Ganesh Pawar, N L Dalmia College, Mira Road, Thane.

Prof. Anik Kumar Singh, Formerly IIT -Bombay, Rashtriya Chemicals and Fertilisers Ltd., Mumbai,

Prof. Selvam, IIT-Madras, Chennai

Prof. Shaikh Mobin, IIT-Indore

Dr. Bipul Saha, IUPAC, Indira University, Pune

Prof. Hemant Joglekat, Institute of Chemical Technology, Mumbai

There were 93 oral and poster presentations by the nearly 200 delegates from academic and research institutions and industry. ACT gave prizes for the best presentations.

Prof. Suvarna Kulkarni, Department of Chemistry, IIT-Mumbai was the Chief Guest at the Valedictory function held on September 13, 2025.

The conference brought educators, scientists, innovators and research scholars on a common platform to interact and share ideas.



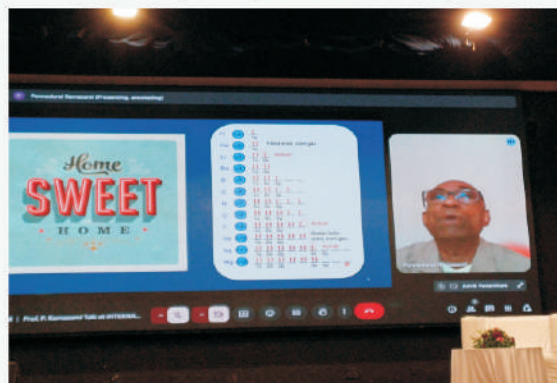
**Dr. Bipul Saha speaking on Diverse activities of IUPAC**



**A prize winning poster at Somaiya Vidyavihar University Mumbai**



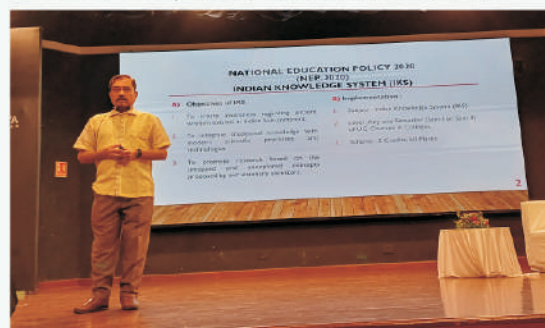
**Dr. Satish Pai speaking on Trends in the Life Sciences and Healthcare Industry**



**Prof. Ponnadurai Ramasami's lecture on A Journey to the House of Electrons**



**Banner of the International Chemistry Conference**



**Principal Dr. Ganesh Pawar speaking on Indian Knowledge Systems**



**Prof. John Warner speaking on Green Chemistry: Nature's mechanism of sustainability- Molecular Biomimicry**

## One day Seminar on Digital and Visual Supported Chemistry Education

A One day seminar on **Digital and Visual Supported Chemistry Education** was organized jointly by Sri Chaitanya Institutions, Infinity Learn and Association of Chemistry Teachers on 13<sup>th</sup> September 2025 at **Sri Chaitanya Medical Academy**, Poranki, Krishna District of Andhra Pradesh State. The academics of the Seminar were coordinated by **Dr. Mannam Krishna Murthy**, Secretary, South zone on behalf of ACT. A total of **418 girl students**, who have completed their Class XII from about 130 high schools and Junior Colleges from the states of Andhra Pradesh, Telangana, Tamilnadu and Karnataka participated in the event. These student participants are aspirants of NEET 2026. **16 Teachers** also participated in the event.

A talent search objective on line test was conducted in the pre lunch session, by Infinity Learn, Hyderabad, batch wise (six batches, each batch with a maximum of 70 students : 9-30 to 10-00, 10-05 to 10-35, 10-40 to 11-10, 11-15 to 11-45, 11-50 to 12-20 and 12-25 to 12-55 hrs). The first academic session was on digital supported learning in chemistry education, scheduled between 14-00 to 16-00 hrs. **Mr. I. Sasidhara Sai**, Academic Dean of Sriprada Education Unit, Gosala and **Mr. R. Siva Naga Prasad** of Sri Chaitanya Medical Academy, Poranki used the digital talking facility on General Organic Chemistry, available at once from the demo class room to all batches of student participants present at six separate class rooms.

After a tea break, a motivation meeting was conducted for all student participants together in a single place between 16-30 to 17-00 hrs. **Dr. Y. Narasimharao**, KBN College, Kothapet was the chief guest. He has delivered a brief note of Swamy Vivekananda's quotes which will help the students to excel in their future education. Gifts were presented to **Ms. M. Sri Keerthana** and **Ms. K. Swetha Royal** for their best performance in the talent search test. **Dr. Mannam** delivered a brief note on the silver jubilee year academic activities of ACT. The second academic session was on visual supported chemistry education, scheduled between 17-00 to 19-00 hrs to all participants together. **Mr. S.J.N. Prasad**, Gayatri Vedavyas Unit, Venkateswara Nagar and **Dr. Mannam Krishna Murthy**, Varsity South Education Management Limited, Hyderabad were the two speakers, who presented visual animated versions on Periodic Classification of Elements and Concepts of Chemical Bonding, respectively.

The seminar was concluded with a positive note that digital supported education as a strong tool of bringing minimum expertise resources to reach maximum number of users and also visual supported education clearly makes an easy understanding of concepts. Student participants felt happy and benefited by involved interaction with the resource persons.



**Subject resource persons of the seminar**



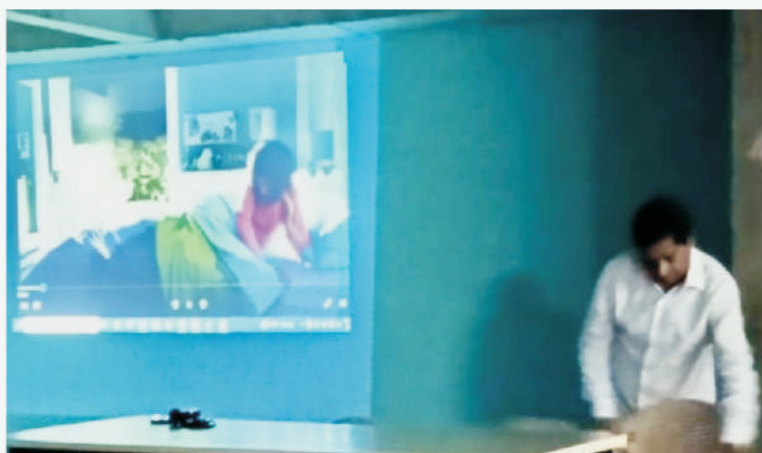
**418 Student and  
16 Teacher participants of the seminar**



**Winners of the talent search test, receiving prizes from Dr. Y. N. Rao**



**Mr I. Sashidhara Sai at his Digital Presentation**



**Dr Mannam at his Visual animation presentation**

## Report on National Chemistry Day

National Chemistry Day was celebrated on 10<sup>th</sup> December, 2025 at Gayatri Vedavyas Girls Campus, Gurunanak Colony, NTR District, Andhra Pradesh State. These celebrations were organized jointly by Varsity South Education Management Limited and Association of Chemistry Teachers (ACT, Mumbai).

*Dr. Mannam Krishna Murthy, Secretary, South Zone ACT*, coordinated the event. There were 208 students and 6 chemistry teachers participated in the celebrations.



Motivational speech by the chief guest

Talent search test was conducted, on the importance of chemistry in everyday life during the forenoon session by **Infinity Learn** in three batches of students, each a maximum of 70 students, between 10.00-10.50, 11.00-11.50 and 12.00-12.50 hrs

In the afternoon session, the celebrations were conducted with a play of the recorded speech by *Dr. Mannam* on the academic activities of ACT.

*Mr. B. Narayana Reddy*, Academic Dean, Sri Chaitanya MPL Academy, Gosala was the Chief Guest, who delivered a motivational talk on the role of chemistry for future developments in industry and environment.

There were two invited talks delivered by the chemistry faculty of Gayatri Vedavyas; one by *Mr. K. Venkat* on the structural isomerism of organic molecules and another by *Mr. B. Yedukondalu* on the stereo isomerism of organic molecules

The celebrations were concluded with an interactive session of student participants with the teachers and resource persons. *Ms. N. Prerana* received the prize, for her best performance in the talent search test, from *Mrs. K. Uma Rani*, Personal officer, Varsity Management Limited.



Presentation of prize to best performer in the test.

## Report on National Seminar on “Chemistry for a Healthier Life and Greener Planet”

National Seminar on “Chemistry for a Healthier Life and Greener Planet” The Department of Chemistry, Navyug Kanya Mahavidyalaya, Lucknow, in collaboration with the Association of Chemistry Teachers (ACT), India, organized a one-day national seminar on October 15, 2025, celebrating ACT's 25th anniversary. The event began with lamp lighting, a Saraswati Vandana dance, and a traditional welcome of guests. Dr. Ajit Kumar Shasane (Director, CSIR–NBRI as Chief Guest) and Dr. Namrata Rastogi (Senior Principal Scientist, CSIR–CDRI as Special Guest) delivered inspiring lectures on the role of chemistry in health and environmental sustainability. ACT dignitaries Prof. Shraddha Sinha, Prof. Sudha Jain, and Mr. Shailendra Jain graced the occasion. A short skit on “Save Water, Save Planet” by Club Nav Umang students spread a strong environmental message. Principal Prof. Manjula Upadhyay praised the students' and efforts of the Convener Dr. Neha Agarwal in promoting scientific learning.

The event concluded with a vote of thanks and the National Anthem. ACT Silver Jubilee celebrations at Navyug Kanya Mahavidyalaya-Lucknow (Prof. Sudha Jain (Former President-ACT, Prof. Shraddha Sinha-ACT Vice President (North Zone), Dr. Neha Agarwal-Convener ) Felicitation of Chief Guest Dr. Ajit Kumar Shasane-Director CSIR–NBRI at National Symposium on Chemistry for a Healthier Life and Greener Planet Chemistry Students performing Play on "Save Environment" in National Symposium



1. ACT Silver Jubilee celebrations at Navyug Kanya Mahavidyalaya-Lucknow (Prof. Sudha Jain (Former President-ACT, Prof. Shraddha Sinha-ACT Vice President (North Zone), Dr. Neha Agarwal-Convener )



Felicitation of Chief Guest Dr. Ajit Kumar Shasane-Director CSIR–NBRI at National Symposium on Chemistry for a Healthier Life and Greener Planet



Chemistry Students performing Play on "Save Environment" in National Symposium



Group photograph-National Symposium on Chemistry for a Healthier Life and Greener Planet, at Navyug kanya Mahavidyalaya, Lucknow

## Report on State - Level 3 - Day JAM/CUET workshop

A State Level 3-Day Joint Admission Test for Masters (JAM)-Central University Entrance Test (CUET) workshop was organized at Ramakrishna Mission Vivekananda College, Mylapore, Chennai - 04, Tamil Nadu during 08-10, September 2025. This event was supported by Association of Chemistry Teachers. The academic proposals of the conference were coordinated by **Dr. D. V. Prabhu, President, Association of Chemistry Teachers**, Homi Bhabha Centre for Science Education (TIFR), V N Purav Marg, Mankhurd, Mumbai 400088.

Day 1 programme started with the Inauguration ceremony, held at Saradha Hall. **Dr. B. Ganeshbabu, Convener and Head of the department of chemistry, RKMVC, Chennai**, extended a warm welcome to the participants. There was a total of 104 registered participants (U.G. students) from 18 colleges ranging from Government, Government-Aided and Private Colleges across Tamil Nadu state. **Revered Swami Dhyaganamyana Maharaaj**, Secretary of RKMVC delivered the benedictory address and graced the occasion

**Dr. K. Geetha, Controller of Examinations and Head, Department of Chemistry, Muthurangam Govt. Arts College, Vellore** was the chief guest. In her inaugural address, she highlighted the importance of JAM, CUET and other competitive exams in Chemistry to the young aspiring minds

There were 3 invited lectures on Day 1 and 2 invited lectures on Day 2 and Day 3 more, covering various aspects of Chemistry aimed at enriching the prowess of students in JAM and CUET - Chemistry syllabus with Previous Year Questions, sample problems and worksheets for practice.

Sr.No.	Resource Person	Affiliation
1	Dr. K. Geetha	Muthurangam Govt. Arts College, Vellore, Tamil Nadu.
2	Dr. S. Sabiah	Pondicherry University, Tamil Nadu.
3	Dr. S. Jayasankar	Ramakrishna Mission Vivekananda College, Chennai, Tamil Nadu.
4	Sri. A. Gopalkrishnan	Dwaraka Doss Goverchan Doss Vaishnav College, Chennai, Tamil Nadu
5	Dr. Sankararaman. S	Indian Institute of Technology-Madras, Chennai, Tamil Nadu.
6	Dr. A. Rajendran	Sir Theagaraya College, Chennai, Tamil Nadu.
7	Dr. S. Swarnalakshmi	Guru Nanak College, Chennai, Tamil Nadu

Apart from the invited presentations, students were involved in active peer group discussions and a MCQ test was conducted to identify the candidates for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> cash prizes which were awarded during the valedictory function on Day 3.

Day 3 programme concluded with a valedictory function. A total of 3 prizes were awarded, by ACT, to meritorious students who performed exceptionally in the test and were diligent during discussions and doubt clearing sessions with resource persons. The participants actively interacted with all resource persons after their respective presentations and provided their feedback of the session and the inspiration of the students reflected in their immersive and wholehearted feedback of the sessions.

**Dr. S. Kumaresan, Principal, RKMVC** welcomed the gathering in the valedictory session. **Revered Swami Dhyaganagamyanda Maharaj**, Secretary of RKMVC delivered the benedictory address and graced the occasion. **Dr. M. Swaminathan, Emeritus Professor, Nanomaterials Laboratory, Department of Chemistry, International Research Centre, Kalasalingam University, Krishnankoil, Tamil Nadu**, was the chief guest in the valedictory session. In his valedictory address, he highlighted the importance of competitive exam preparation and also spoke in detail about the profound opportunities and careers after research in Chemistry. He stressed the importance of Homi Bhabha Centre for Science Education (TIFR) funded programs aimed at the empowerment of Chemistry scholars across the country. **Dr. T. Sivaramakrishnan**, Coordinator of the Programme presented the report of the entire event, while **Dr. R. Velmurugan**, Coordinator of the programme introduced the chief guest. **Dr. M. Kannan**, Coordinator of the programme proposed the Vote of thanks.



**Felicitation of Prof. M. Swaminathan by Secretary of the College Hon'ble Swamiji**



**Convener of Workshop Dr. R. Velmurugan Introducing Prof. M. Swaminathan**



Distribution of Certificate to participants



Audience of the Workshop



Delivering valedictory address in the Workshop

## Report on International Conference

A two day International Conference on **Green Hydrogen : Fuel of the Future**, was organized at **Sri Durga Malleswara Siddhartha Mahila Kalasala (SDMSMK)** Vijayawada, A.P. State, during 19-20, September 2025. This event was supported Siddhartha Academy of General and Technical Education (Golden jubilee year) and Association of Chemistry Teachers (Silver jubilee year). The academic proposals of the conference were initially drafted and coordinated by **Dr. Mannam Krishna Murthy**, Secretary, South zone, on behalf of ACT.

Day 1 programme was started with the lightening of lamp, in the Inaugural ceremony, held at the webinar hall. **Dr. V.V. Subramanya Kumar**, Principal, SDMSMK extended a warm welcome to the participants. **Dr. S. Kalpana**, Convenor of the conference presented a detailed schedule of the conference. There was a total of 256 registered participants, ranging from teachers, industry persons, research scholars to P.G. and U.G. students

**Mr. K. Pattabhi Ram**, Chairman of Swachha Andhra Corporation was the chief guest, who released the proceedings of the conference ISBN 978-93-344-0787-7, containing 53 full papers. In his inaugural address, he highlighted the importance of green procedures for a clean and healthy environment.

**Prof. M.V. Basavesara Rao**, Rector, Krishna University, Machilipatnam was the guest of honour. He emphasized on the need and support of governments towards alternate energy resources in general and hydrogen in particular. **Dr. Mannam** gave a brief presentation of academic activities of ACT, towards Chemistry Education and Popularisation of Chemistry.

There were 2 invited presentations on Day 1 and 3 more on Day 2, covering various aspects of hydrogen, not only an alternate energy source, but also eco-friendly future fuel.

Sr.No.	Resource Person	Affiliation	Mode
1	Dr. Sunkara Mahendra	Conn centre for Renewable Energy, Louisville, U.S.A.	Online
2	Dr. G. Ramesh Kumar	Pandit Deendayal University, Gandhinagar, India	Online
3	Mrs. K. Radha Kalyani	University of Toledo, U.S.A.	Online
4	Dr. Mannam Krishnamurthy	Varsity South Education Mgmt. Ltd., Hyderabad, India	Direct
5	Dr. M. Pardha Saradhi	SRM University A.P., Amaravati, India	Direct

Apart from the invited presentations, teachers and research scholars presented on their papers related to the literature and research on hydrogen fuel. In addition, both poster and elocution competitions were conducted to U.G. and P.G. students, participated from 15 different colleges of 3 districts of A.P. State.

Day 2 programme was concluded with a valedictory function. A total of 10 prizes were awarded, by ACT, to merit performances of research scholars and students. The participants interacted with all resource persons after their respective presentations. **Mrs. M. Subhasini**, Co-convenor and HoD, Chemistry SDMSMK proposed a vote of thanks.



Lighting the lamp and declaring the opening of the conference



Release of the proceedings of the conference, by the chief guest, during the inaugural session



**Packed participants of the conference, in the webinar hall**



**One of the prize winning poster presentations, by student participants**



**Staff and student participants of Siddhartha group, at the concluding session**

## REPORT NIRANTAR 2025

CCITC annual science fest “Nirantar-A Quest never at rest “was held in the premises of Isabella Thoburn College on Saturday, 11<sup>th</sup> October 2025, under the aegis of the Department of Chemistry, in collaboration with Association of Chemistry Teachers (ACT) and Uttar Pradesh academy of sciences (UPAS).

Prof. Alok Dhawan Director CBMR, President UPAS, Prof. V. K. Sharma , Dean student welfare and Head Department of Chemistry, University of Lucknow, Dr D Charles Director IT professional College, Dr. E. S. Charles president IT College, Dr. (Maj) N. Masih Principal IT College, Prof. Seema Joshi, Head Department of Chemistry I.T. College and student president CCITC Ms. Deepanjali Bisht inaugurated the festival by ceremonial lighting of the lamp. Distinguished guests and good number of alumnae joined the festival as judge and as special guests.

"Science and technology are omnipresent, and students must understand its importance," Prof Dhawan said in his key note address. He advised students to grab each and every opportunities coming in their way. He called the fest as concourse of creativity and science.

Prof. Seema Joshi, Head Department of Chemistry while explaining the meaning of tag line of the fest. “A Quest Never at Rest' sent out the message that science can be fun and need to be learnt through interest. Off. Principal, Dr. (Maj) N. Masih explained objective and significance of this fest for fostering a scientific temper among the youth and declared the fest open.

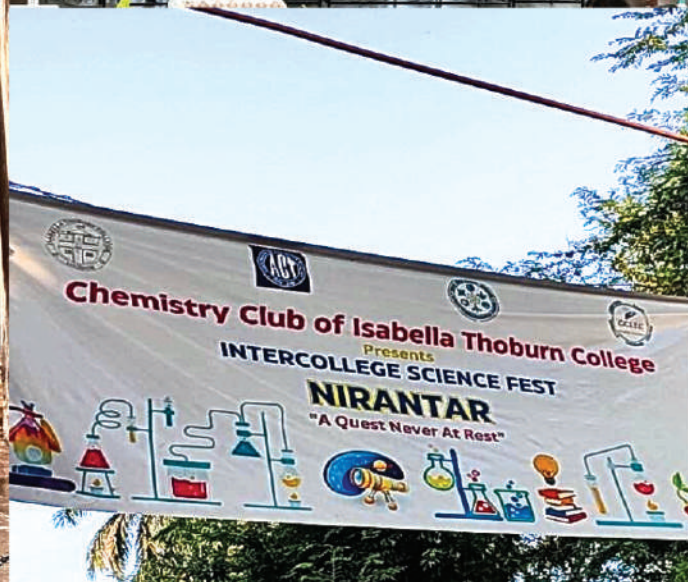
To inculcate interest in science subjects is the major concern of this festival. To reignite a passion for the sciences 8 events like a debate, a quiz and a theatrical competition were held among others. Around 300 students from more than 20 educational institutions of Lucknow and nearby districts participated in the festival. Debate and Science Thespian gave opportunity to the students to develop critical thinking, explore their artistic skills, and challenging scenarios. Mnemonics was well appreciated by all the participants, as it gave them interesting tricks for studies. Prof Sudha Jain former Head Department of Chemistry university of Lucknow, former President ACT, Ms. Nidhi Pandey Vice president Airtel international LLC and Prof. Shraddha Sinha Vice President ACT North Zone gave away prizes to the winners.

The event concluded with the valedictory ceremony with Isabella Thoburn College being declared the overall winner among all participating institutions. However, being the host institute, the trophy was passed onto the team from army public school Sapru Marg.



Lucknow, Uttar Pradesh, India  
 Isabella Thoburn Building, Acharya Narendrakrishna Marg,  
 Vivekanandapur Hydel Colony, Nirala Nagar, Lucknow, Uttar  
 Pradesh 226020, India  
 Lat: 26.872132° Long: 80.942313°  
 Saturday, 11/10/2025 04:36 PM GMT +05:30

Lucknow, Uttar Pradesh, India  
 Isabella Thoburn Building, Acharya Narendrakrishna Marg,  
 Vivekanandapur Hydel Colony, Nirala Nagar, Lucknow, Uttar  
 Pradesh 226020, India  
 Lat: 26.872132° Long: 80.942313°  
 Saturday, 11/10/2025 04:57 PM GMT +05:30



## Report on Industrial Tour to Kalajyothi Process

An industrial tour was organized to **M/s. Kalajyothi Process Private Limited, Raviryal, Rangareddy District, Telangana State**, as a part of Silver Jubilee Year academics of Association of Chemistry Teachers, on **October 31, 2025**.

A ten member tour team was lead by **Dr. Mannam Krishna Murthy**, Secretary South Zone, ACT. ACT life members, **Dr. J.V. Krishna Reddy, Dr. A. Koteswara Rao, Mr. K. Ravindra Kumar, Mr. V. Kumar** and five executives from **Varsity South Education Management Ltd, Hyderabad (an institutional member of ACT)** were among the visiting team.

There were two main divisions of the host industry: Publishing division which handles high quality print solutions and packaging division which focuses on creating novel packing solutions.

The visiting team was initially briefed on the safety and security measures. The members were then benefited by a presentation on various technical stages to bring print version of a bound book and also a pinned magazine. The stages include computer to plate making, printing, composing, perfect binding, cutting and packing. The printing has four alternatives namely hot case, cold case, sheet feed and web offset processes.

The aim of the tour was mainly understanding the chemistry of principle raw materials of printing industry: paper, colors and adhesives.

**Paper** : Roles and cut sheets of paper and cover page boards were prepared from wood pulp and waste used paper. Bleaching brings whiteness to paper, which involve oxidative process using hypochlorite and reduction process using hydrogen peroxide. Stiffness of thin sheets of paper can be achieved by starch and pillar material sodium silicate, during the preparation.

**Colours** : Single color and multicolor processes utilize printing inks as one of the main inputs.. The principle chemical of black ink is an allotrope of carbon, called carbon black. Different colored dyes are ingredients in color printing inks. The CMYK (Cyan, Magenta, Yellow and Key black) model also known as four color process is the most common method in color printing. Various combinations and percentages of four colors of CMYK can furnish thousands of desired color tints.

**Adhesives** : Dispersion adhesives are commonly used in perfect binding of a book. However, hot melt and polyurethane glues are used for specific applications of printing and packaging.

Though the industrial tour is different from routine academics, it has added additional knowledge in general and chemistry applications in particular.

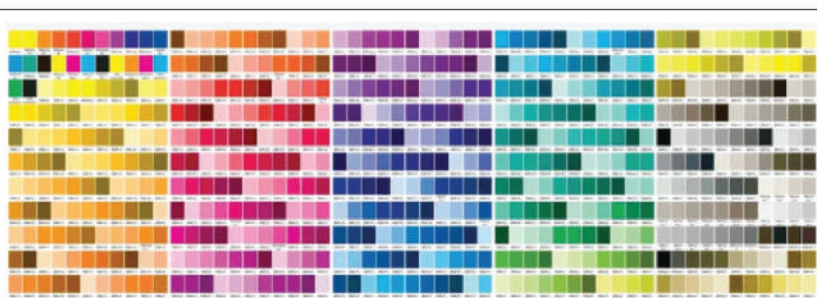
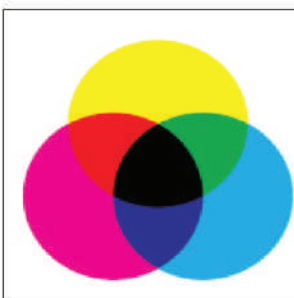
The visiting team acknowledge the permissions given by **Mr. Alapati Ramanath**, Managing Director and the visit arrangements made by **Mr. Sarath Gandhi**, plant head of Kalajyothi Process.



Dr Mannam at the east entry point of the industrial building



Briefing on safety and security measures inside the plant



CMYK model an 25 thousand plus color palette images

## Report on USA International Seminar

An International Seminar on **Green and Sustainable Chemistry** was organized by Association of Chemistry Teachers, outside India, at the **Department of Chemistry and Biochemistry, Georgian Court University**, Lakewood town ship, New Jersey of **United States of America** on October 3, 2025. This was a milestone maiden academic event of ACT, at abroad, in its silver jubilee year.

*Prof. P.S.Lakkaraju*, HoD of Chemistry and Biochemistry of GC University, USA and *Dr. Mannam Krishna Murthy*, Secretary South Zone of ACT acted as Convenors of this Seminar.

The seminar was inaugurated with the exhibition of ACT silver jubilee logo, which was presented to *Prof. Lakkaraju* by *Dr. Mannam*. There were three invited talks at the seminar.

*Dr. Eduard Bitto*, professor of Biochemistry, GC University, USA presented an elaborated note on the twelve principles of green chemistry and the importance of green technologies.

**Dr. Lakkaraju**, who is also a visiting professor of Chemistry at Princeton University, USA, emphasized on the importance of the removal of Carbondioxide from the atmosphere, which minimises the unwanted global warming. He also gave a brief presentation on the green synthesis of formic acid.

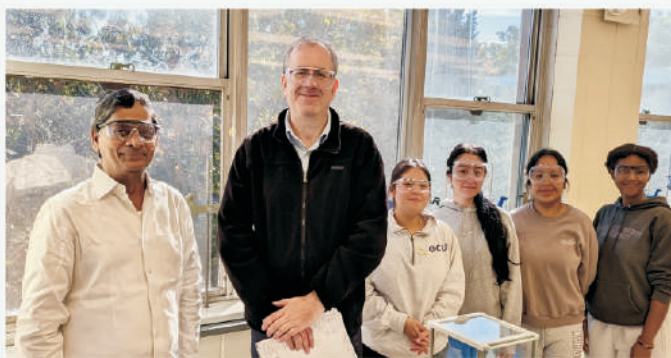
**Dr. Mannam Krishna Murthy**, Chief Executive Dean, Varsity South Education Management Ltd., Hyderabad, India presented on the Sustainability of Hydrogen as Eco-friendly fuel. The hydrogen fuel economy and future perceptives were also reviewed.

There were 28 postgraduate students and 4 research students participated in the seminar. **Dr. Jean Parry**, Professor of Biosciences department, GC University, USA also participated in the seminar and discussions.

Some of the participants interacted with the invited speakers during the concluding session. **Dr. Mannam** presented few printed copies of chemistry books to **Dr. Jeff Donnley**, Librarian of GC University, USA. **Mrs. M. Usha Kiran**, ACT Life member and Dy. Director, Verizon wireless, NJ, USA coordinated the conveyance and other arrangements for the success of this event.



**Dr Mannam and Dr Lakkaraju, with ACT logo during the inauguration of the Seminar, at PG Lecture hall, GC University, NJ USA**



**Dr Mannam, Dr Bitto and research students participated in the seminar**



**Some student participants, who interacted with the invited speakers during concluding session**



**Dr Donnley, receiving copies of the printed books from Dr Mannam**

## International Conference on Smart Materials for Innovation in Low Carbon Energy and Environment (SMILE-2025)



Lightening of Lamp by the Hon'ble Dr. V. Jayaraman, Director, IGCAR, Kalpakkam and others

SRM Institute of Science and Technology, Ramapuram, Chennai successfully hosted International Conference on Smart Materials for Innovation in Low Carbon Energy and Environment. The department of Chemistry at SRMIST, Ramapuram proudly conducted a two-day ANRF sponsored International Conference on Smart Materials for Innovation in Low Carbon Energy and Environment (SMILE-2025) in association with Association of Chemistry

Teachers (ACT), Mumbai. This prestigious gathering of experts, researchers, academicians and industry professionals happened on 12<sup>th</sup> and 13<sup>th</sup> December, 2025 and a special souvenir highlighting the contributions of the scientific community was released during the conference.

The conference centered on recent technological breakthroughs and their practical deployments in Nano and bio inspired smart and functional materials, Low carbon and renewable energy innovations, Artificial photosynthesis and CO<sub>2</sub> utilization technologies, Materials for waste water treatment and desalination, AI driven design of smart materials and Digital twins for energy and environment solutions.



Felicitation of Hon'ble Guest

A Presidential Address was delivered by the Registrar, SRMIST, who appreciated the initiative and stressed the role of research-driven education in addressing global sustainability challenges and a Felicitation address by the Dean (E&T), SRMIST, Ramapuram highlighted the importance of interdisciplinary research and encouraged participants to pursue innovation through global partnerships.

The event was inaugurated by Dr. V. Jayaraman, Director, Materials Chemistry & Metal Fuel Cycle Group, IGCAR, Kalpakkam. In his inaugural address, he underscored the need to strengthen national and international collaborations to accelerate progress in smart materials



**Release of Abstract Book of SMILE-2025**

Chemistry Teachers, Mumbai has elaborated the activities of ACT. The conference also featured a special address by Guest of Honour, who shared valuable insights on recent advances in material technologies. In addition, Guest of Honour, Prof. John C. Warner, USA, delivered an inspiring lecture focusing on sustainable chemical innovations and the future of green technologies. Their contributions added significant depth and direction to the conference discussions.

Technical sessions featured around 150 research papers and presentations from scholars across countries like Germany, France, Malaysia, South Africa, Oman, USA and China. The conference provided early career researchers and students with opportunities to disseminate their research, engage with established leaders in the field and expand professional scientific networks.

Speaking about the success of the conference, **Dr. Helen. P. Kavitha**, Head of the department, stated, that the conference is a dynamic platform for knowledge exchange, collaborative discussions and networking opportunities among participants there by facilitating the progression of laboratory research towards scalable industrial implementation.

The event concluded with a valedictory ceremony, where outstanding contributions and innovative research works were recognized with awards and certificates. The organizing committee expressed heartfelt gratitude to all participants, sponsors and partners for their support in making the conference a grand success. The event reinforced SRMIST's continued commitment in promoting research excellence to foster a culture of innovation.

research and clean energy innovation. Renowned speakers from across the globe delivered keynote lectures offering valuable insights and highlighting future directions aligned with the conference theme.

**Dr. D.V. Prabhu**, President, Association of



**Guest of Honour, John C. Warner (USA), delivered an inspiring lecture.**

# Piezoelectric Nanomaterials: ZnO, BaTiO<sub>3</sub> and Beyond

**Dr. Rashmi . R. Dubey**

Department of Chemistry, Kamla Nehru Mahavidyalaya,  
Nagpur (MS) India- 440024

## INTRODUCTION

Piezoelectric nanomaterials have emerged as a central topic in contemporary materials science due to their ability to directly convert mechanical energy into electrical energy and vice versa. This electromechanical coupling becomes particularly significant at the nanoscale, where size effects, surface phenomena, and structural anisotropy can substantially enhance piezoelectric performance (Curie and Curie 1880). With the rapid advancement of miniaturized electronics, wearable devices, and autonomous sensing systems, there is growing demand for compact, efficient, and mechanically flexible piezoelectric materials capable of operating under low-force mechanical stimuli. Consequently, extensive research efforts have been directed toward understanding, designing, and optimizing piezoelectric materials at reduced dimensions lines.

Among the various piezoelectric nanomaterials investigated to date, zinc oxide (ZnO) has received considerable attention owing to its intrinsic piezoelectricity, wide band gap, and chemical stability. The piezoelectric properties of ZnO originate from its polar wurtzite crystal structure, which lacks inversion symmetry and supports spontaneous polarization along the c-axis. ZnO nanowires and thin films are particularly attractive because they can be synthesized using relatively low-temperature and scalable techniques while maintaining high crystalline quality.

This article aims to provide a comprehensive overview of recent progress in piezoelectric nanomaterials, with particular emphasis on ZnO nanowires and thin films, perovskite-based piezoelectric materials and doping effects, lead-free piezoelectric systems, and crystal growth techniques. By critically examining existing literature and highlighting key advances and challenges, this article seeks to offer a consolidated perspective on current trends and future opportunities in the development of high-performance, environmentally sustainable piezoelectric nanomaterials.

## Advances in Perovskite and Lead-Free Piezoelectrics

In parallel with ZnO-based nanostructures, research on perovskite piezoelectrics continued to evolve, with increasing emphasis on compositional modification and nanoscale design. The systematic exploration of doping effects in BaTiO<sub>3</sub> and related perovskites provided deeper insight into the role of lattice distortion, phase coexistence, and domain wall dynamics. The identification and exploitation of morphotropic phase boundaries in both lead-based and lead-free systems represented a major conceptual advance, enabling significant enhancement of piezoelectric properties through phase engineering.

## Recent Milestones and Current Trends

In recent years, several notable milestones have shaped the direction of piezoelectric nanomaterials research. The integration of piezoelectric nanomaterials into flexible and wearable devices has demonstrated the feasibility of mechanically compliant, self-powered

systems. Advances in thin-film deposition and nanofabrication have enabled the realization of highly oriented piezoelectric films compatible with silicon-based technologies, facilitating their incorporation into MEMS and NEMS platforms.

### Principle of Piezoelectric Nanomaterials

Piezoelectric nanomaterials are characterized by their ability to produce an electrical response when subjected to mechanical deformation and, conversely, to undergo mechanical strain under an applied electric field. This electromechanical interaction originates from the lack of inversion symmetry in the crystal lattice, which allows mechanical stress to induce a separation of positive and negative charge centres (Kalinin and Bonnell 2002). At nanometre length scales, piezoelectric behaviour is influenced not only by bulk crystallographic properties but also by size-dependent phenomena, surface effects, and interfacial interactions, resulting in electro mechanical responses that differ from those observed in bulk materials

### Crystal Symmetry and Polarization Origin

The existence of piezoelectricity is restricted to crystals with non-centrosymmetric structures. When an external force is applied to such materials, the asymmetric arrangement of ions leads to a net dipole moment. In piezoelectric nanomaterials, this mechanism is often intensified due to reduced dimensionality and geometric confinement. For instance, in ZnO nanowires with a wurtzite structure, mechanical stress applied along the polar c-axis causes relative displacement of  $Zn^{2+}$  and  $O^{2-}$  ions, generating an electric potential across the nanowire.

In perovskite-based materials such as  $BaTiO_3$ , polarization arises from the off-center displacement of the B-site cation within the oxygen octahedron. Mechanical loading alters this displacement, thereby modifying the polarization state and producing an electrical signal. The strength of the piezoelectric response depends on the extent of lattice distortion and the mobility of ions under applied stress, follow the below Fig.1.

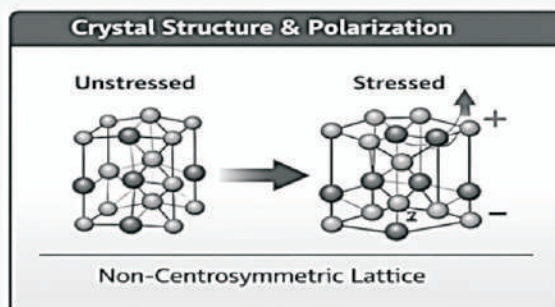


Fig. 1. Crystal structure & Polarization (Lines and Glass 1977)

### Direct and Converse Piezoelectric Responses

Piezoelectric nanomaterials exhibit both direct and converse piezoelectric responses. In the direct effect, mechanical deformation induces electrical charge or voltage, forming the basis for sensing and energy harvesting technologies. In contrast, the converse effect involves mechanical deformation generated by an applied electric field, which is essential for actuator and precision motion applications. At the nanoscale, these responses are strongly affected by factors such as crystallographic alignment, aspect ratio, and boundary constraints, which can significantly influence electromechanical coupling efficiency, as shown in the Fig. 2 & 3 of Direct and Converse Piezoelectric responses.

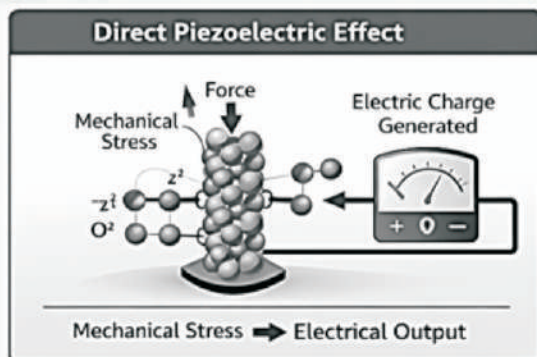


Fig. 2. Direct Piezoelectric effect (Ikeda 1990)

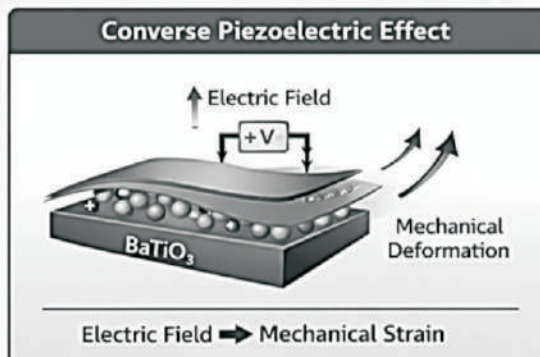


Fig. 3. Converse Piezoelectric effect (Ikeda 1990)

### Influence of Nanoscale and Surface Effects

At reduced dimensions, surface- and interface-related effects play a dominant role in determining piezoelectric performance. The increased surface-to-volume ratio in nanostructures enhances surface polarization and modifies electrostatic boundary conditions. Surface defects, strain gradients, and charge accumulation can contribute additional polarization mechanisms, occasionally producing piezoelectric-like behavior even in materials that show weak responses in bulk form. Moreover, mechanical clamping effects are substantially reduced at the nanoscale, allowing more effective strain transfer and improved piezoelectric output, as shown in Fig. 4.

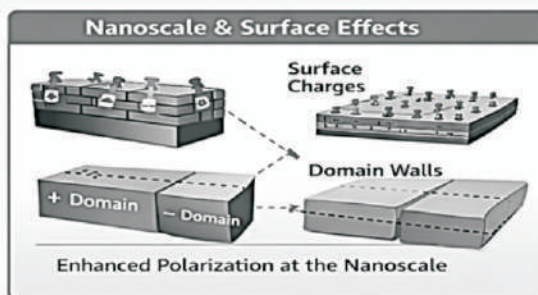


Fig. 4. Nanoscale & Surface effect (Uchino 1997)

### Methods for ZnO Nanowires and Thin Films

ZnO-based piezoelectric nanomaterials are commonly synthesized using both solution-based and vapor-phase techniques, depending on the desired morphology, crystal quality.

#### ZnO Nanowires:

ZnO nanowires are typically fabricated using hydrothermal synthesis, chemical vapor deposition (CVD), and vapor-liquid-solid (VLS) growth (Scott 1989). Among these, hydrothermal growth is widely preferred due to its low processing temperature, simplicity, and compatibility with flexible substrates. In this method, zinc precursor solutions are reacted under controlled temperature and pressure, leading to the formation of vertically aligned nanowires. Vapor-phase techniques such as CVD offer superior crystalline quality and precise control over nanowire orientation and diameter, making them suitable for high-performance piezoelectric nanogenerators.

#### ZnO Thin Films:

ZnO thin films are commonly deposited using sputtering, pulsed laser deposition (PLD), and sol-gel techniques. Sputtering enables large-area, uniform film deposition with good control over thickness and crystallographic orientation. PLD provides high-quality,

stoichiometric films with controlled microstructure, while sol-gel processing offers a cost-effective route for producing thin films at relatively low temperatures. The piezoelectric performance of ZnO films strongly depends on c-axis orientation, film stress, and defect concentration, which are governed by deposition parameters.

#### ***Perovskite-Based Piezoelectric Materials (BaTiO<sub>3</sub>)***

Barium titanate (BaTiO<sub>3</sub>) is a widely studied lead-free perovskite piezoelectric material with excellent ferroelectric, dielectric, and piezoelectric properties. Its performance strongly depends on crystal structure, grain size, phase purity, and orientation, which are controlled by the synthesis method.

#### **Applications of Piezoelectric Nanomaterials**

Piezoelectric nanomaterials such as ZnO nanowires and thin films, perovskite structures like BaTiO<sub>3</sub>, and lead-free alternatives have wide-ranging technological applications. ZnO nanowires are used in nanoscale energy harvesters and self-powered nanogenerators, converting mechanical vibrations into electrical energy for wearable electronics and remote sensors. They also function as highly sensitive pressure, strain, and gas sensors, as well as UV detectors. In biomedical applications, ZnO nanowires provide electrical stimulation for tissue engineering and can generate reactive oxygen species (ROS) for antibacterial coatings. Lead-free piezo materials are gaining importance in eco-friendly sensors, actuators, energy harvesters, and medical ultrasound devices ([Zheng et al 2017](#)). Across these materials, controlling crystal growth enables enhanced device performance and sensitivity. Overall, piezoelectric nanomaterials play a critical role in electronics, energy harvesting, biomedical devices, and smart infrastructure.

#### **ZnO Nanowires and Thin Films**

Zinc oxide (ZnO) nanowires and thin films are commonly studied piezoelectric materials because of their wurtzite hexagonal structure and strong piezoelectric effect along the c-axis. Nanowires have a high surface-to-volume ratio and a long shape, which improves their electromechanical coupling. Thin films can be used on flexible materials, making them useful for wearable devices. ZnO nanostructures can be made using methods like hydrothermal growth, vapor-phase deposition, chemical bath deposition, or sol-gel techniques. These methods allow control over crystal orientation, defects, and shape.

Due to its nontoxicity, ZnO is now widely used as an effective photocatalyst to break down many newly discovered organic pollutants. It has also gained a lot of attention as a raw material in the pharmaceutical and cosmetic industries, as a colorant in paint, concrete, and rubber, as a UV filter in products, in the textile industry, in medical and biological applications.

#### **Conclusion**

Piezoelectric nanomaterials have emerged as essential components in modern technology due to their unique ability to convert mechanical forces into electrical signals and vice versa, often with enhanced performance at the nanoscale. Characteristics such as crystal orientation, surface polarization, reduced mechanical constraints, and domain dynamics contribute to superior electromechanical behavior compared to bulk counterparts. Zinc oxide (ZnO) nanowires and thin films offer high piezoelectric efficiency, biocompatibility, and low-temperature, scalable synthesis, making them suitable for energy harvesters, sensors, actuators, and flexible electronic devices. Perovskite-based materials, particularly barium titanate (BaTiO<sub>3</sub>), exhibit strong ferroelectric and piezoelectric responses that can be optimized through A-site or B-site doping, solid-solution engineering, and morphotropic phase boundary design.

## Academic Participation of ACT EC Members

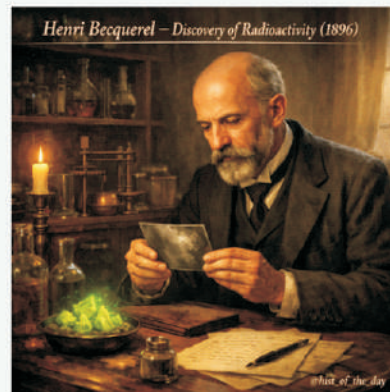
1. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Invited Talk on “Advanced Functional Nanomaterials” in Inauguration of Chemical Society organized by Department of Chemistry, Dharampeth M. P. Deo Science College, Nagpur on 10<sup>th</sup> September 2025..
2. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Invited Talk on “An Overview of Elastomers” in the National Conference on Multifunctional Materials for Sustainable Development, organized by University of Lucknow in collaboration with ISCAS, Jammu, on 20<sup>th</sup> September 2025.
3. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Guest Lecture on “Climate Change, corrective action and Human Responsibility” organized by Govt. Bilasa Girls PG College, Bilaspur, Chhattisgarh 7<sup>th</sup> October 2025.
4. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Guest Lecture on “Advanced Sustainable Functional Nanomaterials” organized by Organized by Department of Chemistry, CMD PG College, Bilaspur, Chhattisgarh, on 8<sup>th</sup> October 2025.
5. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Chaired Technical Session in International Conference on Breakthrough Innovation in Chemical and Sustainable Science: Research and Education, and NCCT-2025 organized by Department of Chemistry, Vikram University, Ujjain on 14<sup>th</sup> November 2025.
6. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Invited Talk on “Advanced Futuristic Materials” in Inauguration of Chemical Society, organized by Department of Chemistry, G. H. Rasoni College of Engineering, Nagpur, on 22<sup>nd</sup> November 2025.
7. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Keynote Address on “Green Approach for Sustainable Development: Nanomaterials” in International Conference on Emerging Trends in Science, Technology and Management, organized by Department of Chemistry, Govt. Shyama Prasad Mukherjee College, Sitapur in Collaboration with ACT, of India, on 1<sup>st</sup> December 2025.
8. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Invited Talk on “Advanced Functional Materials” in International Level one Week FDP on Advanced Sustainable Materials organized by Department of Applied Chemistry, Yeshwamtrao Chauhan College of Engineering, Nagpur in collaboration with ACT of India, on 30<sup>th</sup> December 2025.

9. **Prof. M. Swaminathan**, EC Member of ACT South Zone, delivered a Talk on “Green Photocatalytic Materials for Energy and Environment” in International Level one Week FDP on Advanced Sustainable Materials organized by Department of Applied Chemistry, Yeshwamtrao Chauhan College of Engineering, Nagpur in collaboration with ACT of India, on 29<sup>th</sup> December 2025.
10. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Delivered Invited Talk on “Climate Change, Corrective Action and Human Responsibility” in International Conference on Smart Materials for Innovations in Low Carbon Energy and Environment( SMILE-2026) organized by Department of Chemistry, SRM University, Chennai on 13<sup>th</sup> December 2025.
11. **Prof. Wasudeo Gurnule**, Vice President of ACT West Zone, Chaired Technical Session in International Conference on Universal Development in Chemistry organized by Department of Chemistry, University of Mumbai on 20<sup>th</sup> December 2025.
12. **Prof. D. V. Prabhu**, President of ACT, delivered the Plenary Lecture on 'Promotion of Excellence in Chemistry Education and Some Glimpses of Research in a College Setup' at the International Research Convention on Chemistry for a Sustainable Future: From Molecules to Materials, held on February 13-14, 2026 at Department of Chemistry, IIS (Deemed University) Jaipur.
13. **Prof. D. V. Prabhu's** book on "Fundamentals of Chromatography" was published by Iterative International Publishers, India and Michigan, USA.
14. **Prof. D. V. Prabhu** was elected as Member of the Royal Society of Chemistry (London, UK) Western India Section Committee.
15. **Dr. Mannam Krishna Murthy**, Secretary, ACT South Zone has participated, along with Dr Rajeev Saxena, Additional Chief Secretary T. N. State, as resource person and delivered an academic note on 'paper quality', in a meeting organised by the Tamilnadu Newsprint & Papers Limited meet, at Lemon Tree hotel, Vijayawada on 19<sup>th</sup> November 2025.

## News/Views and More

### Henri Becquerel-Discovery of Radioactivity

On March 1, 1896, French physicist Henri Becquerel accidentally discovered radioactive decay while investigating whether fluorescent materials emitted X-ray-like rays, inspired by Wilhelm Röntgen's recent breakthrough. He placed uranium salts on a black-paper-wrapped photographic plate, anticipating sunlight activation, but cloudy weather led him to store it in a drawer. Days later, developing the plate revealed strong darkening without exposure, proving uranium spontaneously emitted invisible radiation—coined radioactivity—that challenged the indivisibility of atoms and revolutionized physics. This serendipitous find spurred Marie and Pierre Curie's isolation of polonium and radium, earning all three the 1903 Nobel Prize in Physics and paving the way for nuclear science, from cancer therapies and nuclear energy to space exploration.



### The Peregrine Falcon

The peregrine falcon, the fastest member of the animal kingdom, achieves astonishing dive speeds exceeding 320 km/h (about 200 mph) while hunting, generating immense air pressure that could otherwise rupture its delicate lungs by forcing a supersonic blast of air into its respiratory system. To counter this, evolution has equipped the bird with specialized bony tubercles—small, cone-shaped projections inside its nares (nostrils)—that act as aerodynamic baffles, creating turbulence to dissipate shock waves, slow incoming air to subsonic speeds, and regulate airflow for safe, efficient breathing even at these extreme velocities. This ingenious natural design has inspired biomimicry in aerospace engineering, where similar cone-shaped structures in jet engine air intakes mimic the tubercles to interrupt high-speed airflow, reduce it to manageable levels, prevent compressor stall, and enhance fuel efficiency and performance in supersonic aircraft.



**List of newly added Life Members of ACT During September' 2025 to December' 2025**

Sr. No.	Names	LM No.	Institution
1	Dr. V. Durga Praveena	2792	Government College (A), Rajahmundry, Andhra Pradesh -533105.(India)
2	Anubendu Adhikary	2793	Department of Education, IIT Kharagpur, Kharagpur, Dist.- Paschim Medinipur - 721302
3	Dr. Debasish Sarmah	2794	Department of Chemistry, Dakshin Kamrup College, Mirza, Kamrup, Assam-781125
4	Dr. Hemant Shridhar Joglekar	2795	Institute of Chemical Technology, N Parekh Road, Matunga, Mumbai - 400019
5	Lakshmana Rao Atmakuri	2796	V V Institute of Pharmaceutical Sciences, Seshadri Rao Knowledge, Krishna, Near Railway Station, Gudlavalleru, Andhra Pradesh - 521356
6	Dr. Sachin Dilip Yeole	2797	Department of Chemistry, Bhusawal Arts, Science & P. O. Nahata Commerce College Bhusawal - 425201
7	Dr. Gosu Nageswara Reddy	2798	Department of Chemistry, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science & Technology, No.42, Avadi-Vel Tech Road Vel Nagar, Avadi, Chennai - 600062
8	Satya Sree Bandaru	2799	V. V. Institute of Pharmaceutical Sciences, Gudlavalleru post. Krishna Dist.- Andhra Pradesh - 521356
9	Dr. Sanjiokumar S. Rahangdale	2800	Jagat Arts, Commerce and I.H.P. Science College, Goregam Dist. Gondia - 441601
10	Dr. Sandip D. Maind	2801	Bhavans H. Somani College, Chowpatty, Mumbai - 400 007
11	Ushh Kiran M.	2802	Plot : 105A, RTC Colony, Vijayawada - 520008
12	Matta Subhashini	2803	Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijaywada - 520010
13	Radhika Mendu	2804	Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijayawada - 520010
14	Dr. Deepika Choudhari	2805	Government Science College Vadnagar, District Mehsana, Gujarat - 384355
15	Suresh Kumar	2806	Department of Chemistry, Hemchandracharya North Gujarat University, Patan, Gujarat - 384265

**List of newly added Life Members of ACT During September' 2025 to December' 2025**

Sr. No.	Names	LM No.	Institution
16	Dr. Sangita Sharma	2807	Chemistry Department, M. N. College, Visnagar, Gujarat - 384315
17	Kirtikumar Manubhai Joshi	2808	Department of Science and Humanities of Sciences and Humanities, Lukhdhirj Engineering College, Morbi, Gujarat - 363642
18	Dr. Naveen Kumar Sharma	2809	Dept. of Chemistry, Indus Institute of Sciences, Humanities and Liberal Studies (IISHLS), Indus University, Ahmedabad, Gujarat - 382115
19	Dr. Paraskumar Amaratbhai Patel	2810	Sir, C. R. Reddy College of Pharmaceutical Sciences, Eluru, Aandhra Pradesh - 534007
20	Dr. V. Anitha Kumari	2811	Chemistry Department, Sir P.T. Science College, Modosa - 383315 (Gujarat)
21	Dr. Jayshreeben Narsinhbhai Patel	2812	Department of Chemistry, University of Mumbai
22	Navinchandra Gopal Shimpi	2813	Department of Chemistry, Govt. Degree College for Women, Baramulla - 193101 (J&K)
23	Dr. Ali Mohd. Lone	2814	Sir, C. R. Reddy College of Pharmaceutical Science Eluru, Andhra Pradesh - 534007
24	Mrs. Jajili Eluru	2815	Government Engineering College, Sector-28, Gandhinagar - 382028
25	Dr. Niralben Jashavantbhai Modi	2816	S-1, Engg. Hall-6, Bhabha Automic Reserch Center, Trombay, Mumbai - 400088
26	Nikhilesh Nav Vigyan	2817	Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto, Nagaland - 798627 (India)
27	Prof. (Dr.) Ambrish Singh	2818	D. D. S. P. College, Erondol - 425109
28	Dr. Yogesh Santosh Suryawanshi	2819	S.S.M.M. Art s, Science & Commerece College, Pachora - 424201
29	Dr. Sharada Dashrath Shirole	2820	Dept. of Chemistry, Govt. Bilasa Girls P.G. College, Bilaspur, Chhattisgarh - 495001
30	Dr. Archana Patley	2821	Dept. of Chemistry, C.M.Dubey P.G. College Bilaspur, Chattisghar - 495001

**List of newly added Life Members of ACT During September' 2025 to December' 2025**

Sr. No.	Names	LM No.	Institution
31	Dr. Harsha Sharma	2822	Medicaps University, Indore - 453331 (Madhya Pradesh)
32	Dr. Anjali Soni	2823	Tdic 3rd Floor, CSIR-IITR, M.G. Road. LUCKNOW - 226001
33	Dr. Tripti Ahuja	2824	St. John College of Humanities & Sciences, Palghar, Vevoor Road, Maharashtra - 401404
34	Mrs.Namrata Naveen Jha	2825	Govt. Kalidas Girls College, Ujjain (M.P.) 456001
35	Monika Parmar	2826	Pmcoe-shaheed Bheema Nayak Govt P G College Barwani (m.p.) - 451551
36	Basant Kumar Ningwal	2827	K.B.N. College, Kothapet, Vijayawada - 520001
37	Dr. Bhagya Kumar Tatavarti	2828	Dept. of Chemistry, KBN College Vijaywada, Andhrapradesh - 550001
38	Dr. Boyapati Veeranjanyulu	2829	K.B.N. College, Kothapet, Vijaywada (A.P.) - 520001
39	Dr. Khatare Kiran Kumar	2830	K.B.N. College, Kothapet, Vijaywada (A.P.) - 520001
40	Dr. O. Sailaja	2831	K.B.N. College, Kothapet, Vijaywada (A.P.) - 520001
41	Dr. G. Krishnaveni	2832	Dept. of Chemistry, Janta Vidya Mandir Ganpat Rai Rasiwasia College(JVMGRR), Ram Krishan Gupta Marg, Charkhi Dadri, Bhiwani, Haryana - 127306, India
42	Dr. Jitender Kumar	2833	Dept. of Chemistry, Janta Vidya Mandir Ganpat Rai Rasiwasia College(JVMGRR), Ram Krishan Gupta Marg, Charkhi Dadri, Bhiwani, Haryana - 127306, India
43	Dr. Purnima C. Talele	2834	Department of Chemistry, T. K. M. College of Art and Science, Kollam - 691005
44	Simimole H.	2835	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
45	Dr. R. Tamilisai	2836	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060

List of newly added Life Members of ACT During September' 2025 to December' 2025

Sr. No.	Names	LM No.	Institution
46	Dr. S. Kalpana	2837	St Theresa's College for Women, Eluru, Andhra Pradesh, PIN 534001
47	Dr. M. Karthikeyan	2838	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
48	Dr. C. Balraj	2839	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
49	Dr. P. Krishnamoorthy	2840	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
50	Dr. K. Manjula Rani	2841	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
51	Dr. P. Manikandan	2842	Department of Chemistry, Kongu Engineering College, Perundurai, Erode - 638060
52	Dr. Minakshee B. Sawankar	2843	S. Chandra Mahila Mahavidyalya Sadak Arjuni Dist., Gondia - 441807
53	Dr. Priyadarshani N. Deshmukh	2844	Shivaji Science College Nagpur - 440012
54	Dr. Parvez Ali	2845	Vidarbha College of Arts, Comm. & Science, Jiwati, Dist. Chandrapur - 442908
55	Dr. Sanchayita Rajkhowa	2846	Department of Chemisty, Halflong Govt. College, Halflong, Assam, India - 788819
56	Vikas Govindrao Patil	2847	K. J. Somaiya Polytechnic, Vidyavihar (E), Mumbai - 400077



# **ASSOCIATION OF CHEMISTRY TEACHERS**

**(Promoting Excellence in Chemistry Education)**

**Homi Bhabha Centre for Science Education (HBCSE, TIFR)**

**V.N. Purav Marg, Mankhurd, Mumbai - 400 088**

[www.associationofchemistryteachers.org](http://www.associationofchemistryteachers.org)



## **ACT Newsletter**

**ISSUE - 33 SEPTEMBER - DECEMBER 2025**