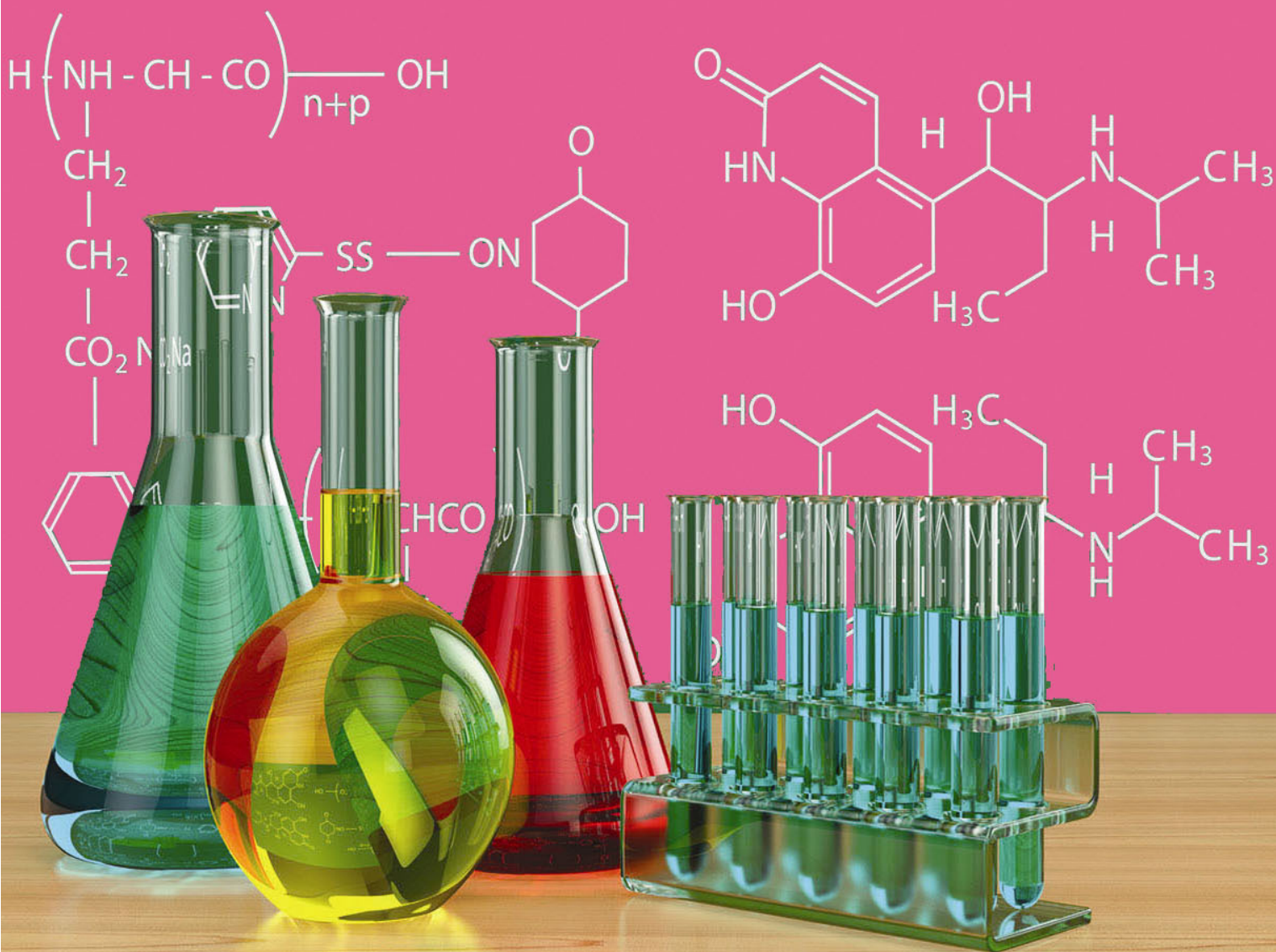




# ASSOCIATION OF CHEMISTRY TEACHERS NEWS LETTER

ISSUE : 9, SEPTEMBER - DECEMBER 2017



# ACT News Letter, Issue 9

September – December, 2017

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**Disclaimer :** The views expressed are that of the authors and ACT is not responsible in any way for them.

## Association of Chemistry Teachers Promoting Excellence in Chemistry Education

*From the Editorial Desk...* 

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### **Dr. Mannam Krishnamurthy, Editor**

Varsity Education Management Limited, Hyderabad

We are happy to inform that the contributions of ACT ranges from International Olympiads, organizing seminars, science exhibitions, workshops, expert invited talks, innovating conceptual science experiments, conferences, talent search examinations, training faculty and students etc. ACT proposes some new activities to be implemented.

We are bringing in the present issue of the news letter with the reports on the ACT activities, latest innovations, new trends, views and news. We have also included a report of the National Convention of Chemistry Teachers-2017 and brief profiles of ACT-2017 award winners.

We invite good suggestions and better contributions from the readers to get best output of the future issues.

## **ACT Executive Council Meet 2 and ACT General Body Meet - 2017**

Second meeting of ACT Executive Council for the year 2016-17 was held at the Conference Hall, Pragati Engineering College, Surampalem, Andhra Pradesh on October 6, 2017 under the chairmanship of **Prof. D.C. Deka**, President of Association of Chemistry Teachers.

**Prof. D.V. Prabhu**, General Secretary ACT read out the minutes of ECM-1 of 2016-17 held on March 4, 2017 at Homi Bhabha Centre for Science Education (TIFR), Mumbai. The minutes were accepted and passed.

The merits of proposed new ACT activities on Chemistry Education and Popularization of Chemistry were discussed and were also accepted and passed.



Annual General Body meeting of Association of Chemistry Teachers for the year 2016-17 was also held at the Conference Hall, Pragati Engineering College on October 7, 2017, under the chairmanship of Prof. D.C. Deka, President of ACT. Prof. D.V. Prabhu, General Secretary ACT read out the minutes, activities held by ACT during 2016-17 and all new proposals of activities. The minutes were passed and new proposals of activities were also approved by the general body of ACT.

ACT and its EC members extend greeting and regards for the achievements and honours of :

**Prof. B.C. Goswami**, former vice president ACT NE Zone has been appointed Vice Chancellor of Cotton University, Guwahati.

**Prof. P.M. Mishra**, vice president ACT East Zone has translated Prof. C.N.R. Rao's book "Nanoworld" into Hindi. Prof. Mishra has been nominated to Central Council of Sahitya Academy, New Delhi.

**Prof. M. Swaminathan**, former vice president ACT South Zone has been elected Fellow of the Royal Society of Chemistry, UK (FRSC).

### **Important decisions taken in the meets**

1. An International Chemistry Conference will be jointly organized by Rasayan Journal of Chemistry, Jaipur; SRM University, Chennai and ACT in December 2018 at SRM University, Ramapuram, Chennai.
2. Concept Test in Chemistry for UG students will be held on January 25, 2018 under the National Coordinatorship of Prof. Subhash Prasad Singh.
3. Next ACT ECM-1 of 2017-18 will be held in last week of Feb. 2018/first week of March 2018 at HBCSSE (TIFR) Mumbai.
4. A Resource Generation Camp (RGC) of 3 days will be held at HBCSE (TIFR) in the first/second week of March 2018.



## National Convention of Chemistry Teachers-2017

and

### National Conference on Innovative Perspectives of Chemistry in Environment, Pharmacy and Technology (CEPT-2017)

A three day National Conference on Innovative Perspectives of Chemistry in Environment, Pharmacy and Technology was organized along with NCCT-2017 at **Pragati Engineering College, Surampalem**, near Kakinada, Andhra Pradesh, during 6-8, October 2017.

This event was organized by **Prof. P.V.S. Machiraju**, **convenor of NCCT-2017** and vice-president of ACT, South Zone. The event was sponsored by BRNS, Bhabha Atomic Research Centre and Association of Chemistry Teachers, Mumbai. Financial support was also extended by Sri Chaitanya Educational Institutions, Vijayawada; Quantalase Enterprises Ltd., Indore; SVRM College, Nagaram; ISO-Tech Systems, Varanasi and JP Vyas & Co., Mumbai.

The inaugural session on day 1 was chaired by Prof. Machiraju. **Dr. P. Krishna Rao**, Chairman, Gayatri Educational Society, Kakinada; **Prof. S. Sambu Prasad**, Principal, Pragati Engineering College; **Prof. D.C. Deka**, President ACT, Guwahati University and **Prof. D.V. Prabhu**, General Secretary ACT, Wilson College, Mumbai were among the dignitaries who illuminated the lamp and released the proceedings of the conference.



**Prof. V. Ravindra**, Director, Infrastructure, Jawaharlal Nehru Technological University, Kakinada attended as Chief guest for the NCCT-2017 and delivered the keynote address. Six outstanding chemistry teachers of the country were presented with the ACT awards 2017. Prof. Y.L.N. Murthy of Andhra University, Visakhapatnam was felicitated with ACT life time achievement award.



There were twelve technical sessions in the three day conference. Executive council meeting of ACT on 6<sup>th</sup> evening was chaired by Prof. D.C. Deka and general body meeting of ACT was conducted by Prof. D.V. Prabhu on 7<sup>th</sup> evening at the conference hall of Pragati Engineering College.

Prof. M. Swaminathan, International Research Centre, Kalasalingam University, Krishnakoil gave an invited lecturer on 'Versatility of Semiconductor Oxide Nanomaterials'.

Dr. G.S. Saxena, vice president, VA Tech Wabag Limited, Chennai gave an invited talk on 'Advanced Technologies for Water and Waste Water Treatment'.

Dr. M. Krishna Murthy, Chief Executive Dean, Varsity Education Management Limited, Hyderabad gave an invited presentation on 'Recent Advances in Eco-friendly Hydrogen Fuel Technology'.

Dr. Murthy Chittoory, vice president, Venky Parenterals, Hyderabad gave an invited talk on 'Innovative Perspectives in Chemistry which are Facilitating New Drug Discovery'.

Prof. D.C. Deka, President ACT, Gawhati University gave an invited talk on 'Heterogeneous Catalysis from Waste Biomass and their Applications'.

Prof. K.P.R. Chowdary, Research Director, Vikas Institute of Pharmaceutical Sciences, Rajahmundry gave an invited lecturer on 'Role of Chemistry in Pharmacy – Need for Innovation'.

Dr. B. Sreedhar, Senior Principal Scientist, Indian Institute of Chemical Technology, Hyderabad gave an invited lecturer on 'Nanoengineered Materials-Synthesis, Characterization and Catalytic Applications'.

Dr. (Mrs.) P. Padma Savitri, Bhabha Atomic Research Centre, Visakhapatnam gave an invited talk on 'Spatial Distribution of Radio Nuclides in the Environment'.

Dr. M.R.R. Prasad, Scientist (retired), ISRO, Government of India gave an invited talk on 'Graphene oxide – Current Research Trend in Solving Environmental Pollution Problems'.

Dr. G. Rama Krishnan, President, Chromatographic Society of India, Mumbai gave an invited talk on 'Interfacing Capillary gas Chromatography with Mass Spectrometer and its Impact Applications'.

Prof. P.V.S. Machiraju, Dean R & D, Pragati Engineering College, Surampalem gave an invited presentation on 'Nature's Action – Human's Reaction'.



There were about 150 delegates participated. 21 delegates gave oral presentation and 79 delegates gave poster presentation. Valedictory function was held on day 3 evening. Copies of ACT News Letter were released by the chief guest **Mr. M. Satish, vice-president of Pragati Engineering College**. 3 best oral and 3 best poster presentations were awarded cash prizes by ACT, Mumbai.

**Dr. Mannam Krishna Murthy, organizing secretary, CEPT-2017** extended vote of thanks and presented an imported chemistry clock on behalf of Varsity Education Mgmt. Ltd., to ACT.



### Academic Participation of ACT Members

**Dr. S. Prasad Singh, Secretary ACT East Zone** organized a Lecture on 'A new look to Periodic Table' by Prof. H.C.Rai, BRAB, University, Muzattarpur, at A.N. College, Patna on 14 September 2017.

**Prof. Shradha Sinha, Secretary ACT North Zone** organized an essay writing competition for engineering students on 'A Step towards Sustainable Development' at BB Das NIIT, Lucknow on 21 September 2017.

**Dr. Mannam Krishnamurthy, EC Member ACT** was a resource person for the 5 day orientation camp on 'Conceptual Learning', organized by Director of Schools, Tamilnadu State Government at Sri Chaitanya MPL Academy, Gosala during 9-13, October 2017. There were 60 teachers participated.

**Dr. Amar Srivastava, EC Member of ACT** organized an essay writing competition and Chemistry quiz on the role of chemistry in sustainable development at DAV College, Kanpur, on 13 November 2017. Prof. Gurunath Ramanathan of IIT Kanpur gave a lecture on the birth anniversary of Sir C.V.Raman.

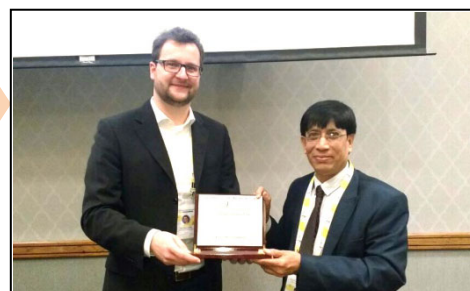
**Dr. Hemant Pande, Vice President ACT West Zone** was a resource person for 3<sup>rd</sup> India International Science Festival organized by DST and VIBHA, at Indian Institute of Technology, Madras and CLRI, Chennai during 13-16 October 2017. 500 Teachers and 2500 students participated in the science festival.

**Dr. Shah D Irani, Secretary ACT West Zone** was active in the organization of 4 days workshop for NET/SEI aspirants at Department of Chemistry, Wilson College, Mumbai during 4-7 December 2017.

**Prof. D.C. Deka, President ACT; Dr. N.N. Talukdar, Secretary ACT, North-East Zone** and **Dr. H.S. Kakati, EC Member ACT** have participated in a workshop on "Importance of Science Education", at Goreswar College, Assam on 30 December 2017.

### ACT Members at International Venues

**Prof. Dibakar Chandra Deka**, President ACT, was invited to "Global Conference on Catalysis and Reaction Engineering" held from October 19 to 21, 2017 in Las Vegas, USA. Prof. Deka delivered his keynote address on "Heterogeneous catalysts from waste biomass and their applications".



**D. Hemant Pande**, Vice-President ACT West Zone acted as a resource person for the 25<sup>th</sup> National Children's Science Congress. He was in the team of Science India Form and organized workshops in 3 schools at Doha, Qatar during 10-15 December 2017. He has interacted with principals, teachers and school students of Doha on experimentation and learning chemistry.



## ACT Awards - 2017

*To honor and felicitate the outstanding Chemistry Teachers of the country ACT has instituted awards, since IYC 2011.*

*ACT Awards for 2017 were presented at the National Convension of Chemistry Teachers (NCCT)-2017 on 6<sup>th</sup> October, 2017, at Pragati Engineering College, Surmapalem, Andhra pradesh.*

*The editorial board of ACT News Letter extends hearty congratulations to all the award winners.*



**Prof. Basabi Mehapatra (64y),  
is the winner of  
Shri Anupam Sinha Best Chemistry Teacher Award-2017**

1

Prof. Basabi obtained her Ph.D. from the Patna University. She has a teaching experience of 35 years. She was selected for Indian Science Congress Association and received Convention award of Indian Chemical Society. Prof. Basabi is now working as Professor and HOD Chemistry at PG Centre, Magadh Mahila College, Patna.

2

**Prof. Shradha Sinha (61y),  
is the winner of  
Best Woman Chemistry Teacher Award-2017**



Prof. Shradha obtained her Ph.D. from the Lucknow University. She has a teaching experience of 19 years. She is a member of Essential Oil Association of India, Indian Society of Analytical Science and ACT North Zone Secretary. Prof. Shradha is now working as Professor of Chemistry at B.B.Das NIIT, Lucknow.



**Dr. Mannam Krishnamurthy (60y),  
is the winner of  
Prof. P.R. Singh Award for Outstanding Contribution  
to Chemistry Education-2017.**

3

Dr. Mannam obtained his Ph.D. from Andhra University. He has a teaching experience of 31 years. He is a member of American Chemical Society, Indian Society for Analytical Scientists, EC member of ACT and Follow of Institution of Chemists. He is Editor of ACT News Letter. Dr. Mannam is now working as Chief Executive Dean (Academics) at Varsity Education Management Limited, Hyderabad.

4

**Prof. Syed Mumtazuddin (58y),  
is the winner of  
Prof. Lallan Singh Award for Best PG Chemistry Teacher  
(State Universes)-2017.**



Prof. Syed obtained his Ph.D. from Bihar University. He has 34 years of Teaching experience. He is a member of Indian Chemical Society, International Science Congress Association, FICCB, FICCE, ACT and Follow of Indian Council of Chemists. He is the managing editor of Recent Life Science Mirror. Prof. Syed is now working as Vice Chancellor of Veer Kunwar Singh University, Ara, Bihar.



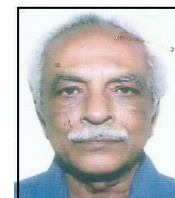
**Dr. P. Venkatesu (51y),  
is the winner of  
Dr. Bhupendra Sahai Saxena Award for Best PG Chemistry  
Teacher-2017.**

5

Dr. Venkatesu obtained Ph.D. from S.V University, Tirupathi. He has 14 years of teaching experience. He was a visiting Professor at South Africa, South Korea, Thiwan and USA. He is editorial board member, Journal of Molecular Liquids and International Journal of Chemistry. Dr. Venkatesu is now working as Associate Professor at University of Delhi.

6

**Dr.P.Goswami (68y),  
is the winner of  
Dr. Uma Sai Prakash Chemistry Popularisation Award-2017**



Dr. Goswami obtained Ph.D. from Calcutta University. He has 31 years of teaching experience. He worked on the development of Chemical magic and Science. Dr. Goswami is now active in popularization of Chemistry to younger generations and creating mass awareness of Scientific thinking.



**Prof. Y.L.N. Murthy (66y),  
is the winner of  
ACT Lifetime Achievement Award-2017**

7

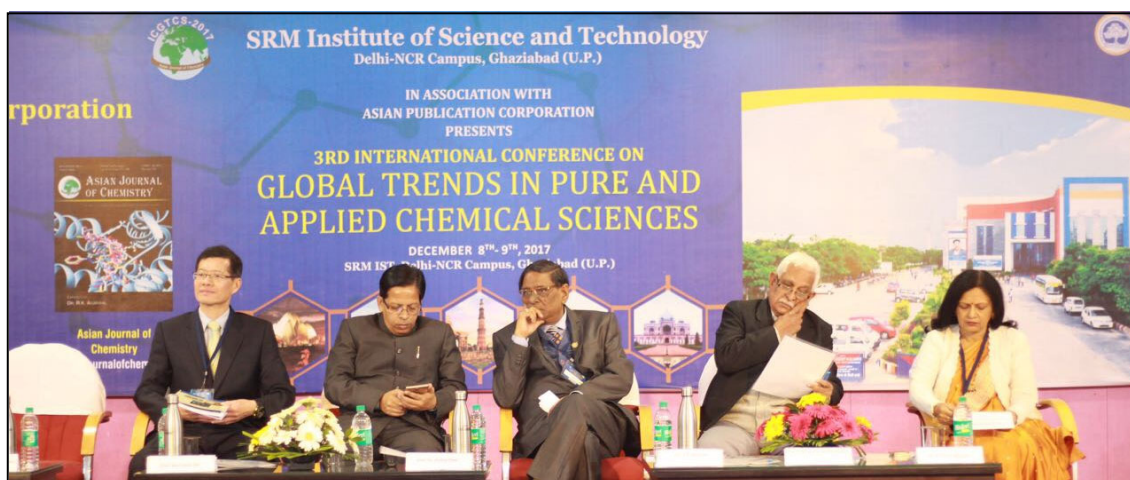
Prof. Murthy obtained Ph.D. from Andhra University. He has a teaching experience of 34 years. He is a member of Royal Society of Chemists, American Chemical Society, Indian Chemical Society, Indian Science Congress Association and Follow of AP Academy of Sciences. Prof. Murthy is now working as Emeritus Professor at School of Chemistry, Andhra University, Visakhapatnam.



## International Conference on Global Trends in Pure and Applied Chemical Sciences

SRM University Ghaziabad in association with Asian Publication Corporation and ACT organized 3rd International Conference on Global Trends in Pure and Applied Chemical Sciences, on 8,9 December 2017.

The conference was inaugurated by **Prof. Manoj Kumar Pandey, Director SRM University, Modinagar; Dr. Ram K. Agarwal, Editor-in-Chief, Asian Journal of Chemistry** and Dr. Ranjana Dubey, Convener, ICGTCS-2017. The chief guest was **Prof. Arvind Dixit, Vice-Chancellor, B.R. Ambedkar University, Agra**. Prof. Falah H. Hussein of University of Babylon, Iraq and Prof. Won-Chun Oh, Editor-in-Chief, Asian Journal of Materials Chemistry, Hanseo University, South Korea were also present.



Plenary lecture on “Synthetic application of carbohydrate-derived donor acceptor cyclopropanes” was delivered by **Prof. S. Chandrasekaran of I.I.Sc., Bangalore**. Keynote lecture on “Anticancer  $\beta$ -lactams Synthesis, biological evaluation and mechanism of action” was presented by **Prof. Bimal K. Banik, Community Health Systems of South Texas, Edinburg, USA**.

The conference was attended by more than 200 delegates from India, China, South Korea, Iraq, Japan, Malaysia, UAE, Indonesia, Armenia, Republic of Iran, Nepal, Nigeria and Saudi Arabia. 11 invited talks, 73 oral papers and 101 posters were presented.

Many ACT members including its general secretary Prof. D.V. Prabhu participated in the conference and involved in the academic discussions.



During Valedictory Ceremony Prof. Bimal K. Banik, Editor-in-Chief, Asian Journal of Organic and Medicinal Chemistry summarized the conference details and give vote of thanks.

## Subject Reports on Workshops and Conference

### Workshop on Exposure to Basic Experiments in Science

The workshop on “Exposure to basic experiments in Science” for Secondary and Sr. Secondary students organized by **Department of Chemistry, A. N. College, Patna** was held on 17-18 Sept.

**Dr. Subhash Prasad Sing, Secretary ACT East Zone** acted as organizing secretary for the two day Science workshop.

**Dr. Paresh K Joshi, National Coordinator, Junior Science Olympiad** and **President, IJSO** from Homi Bhabha Centre for Science Education (HBCSE), TIFR, Mumbai was the Resource Person for the workshop.



The workshop was aimed at exposing students to basic experiments developed for Junior Science Olympiad training & selection program. These experiments aimed to clarify the concepts involved in various topics such as optics, milk digestion, etc. The lens experiment aimed to clarify the concept of refraction, alignment of components, understanding relation between object-lens & image lens distance and finally their applications. Similarly experiment on milk clarified the concept of anti acid digestion and their measurement techniques.

These experiments also aimed at introducing the concept of integration of sciences (Physics, Chemistry & Biology) and group activity. The workshop, in general, was focused at establishing the role of hands-on activity in learning and teaching science. Each day 50 students from various schools took part in the workshop and got benefitted.



Dr. Anju Gupta, Dr. Tripti Gangwar, Dr. Anil Kumar, Dr. Subhash Pd Singh and Dr. Brameshwar, faculty members of the Department extended full support to organize the workshop.

The Principal of the college Dr. Shashi Pratap Shahi appreciated the Chemistry Dept for organizing workshop based on Hands on Activity.



## National Conference AIMEE-2017

The Department of Chemistry has organized a National conference on **Advances in Innovative Materials for Energy and Environment** (AIMEE - 2017) on 13-10-2017 at SRM University, Ramapuram, Chennai in TRP auditorium. **Prof. Helen P. Kavitha**, HOD/Chemistry and Secretary, ACT South Zone welcomed the gathering and gave a overview about the conference.



**Dr. J. Daniel Chellappa, Senior Scientist (TCW), BARC** and Technical Coordinator, Central Expert Group, Kudankulam Nuclear Power Project (KKNPP), Government of India inaugurated the conference. He stressed on the importance of material science in the field of science and technology and also encouraged the participants to go for innovative technologies in the upcoming years. The innovative research on energy resources is the ultimate need of today which can improve the economy of our country.

The first plenary lecture entitled “Novel Technology to Destruct Refractory Organics in Sewage – A boon to ZLD” was given by Dr. G. Sekaran, Formerly Chief Scientist & Cluster Chairman, Environmental Technology Division, CSIR-Central Leather Research Institute, Chennai. The second lecture entitled “Bio-Refinery-A Paradigm Shift in Waste management” was given by Dr. P. Shanmugam, Principal Scientist, Environmental Engineering Department, CLRI, Adyar, Chennai.



Around 75 participants have participated and presented their research papers (Oral/Poster) in the field of energy with sustainable development.

Best oral presentation and poster presentation awards were given in the valedictory function.



## Workshop on “Instrumentation Techniques for Research in Chemical Sciences”

A two days' workshop on “Instrumentation Techniques for Research in Chemical Sciences” was organized at the **Kanoria P. G. Mahila Mahavidyalaya, Jaipur** on December 22-23, 2017 which was jointly sponsorship by the DST, Government of Rajasthan and ACT, Mumbai.

**Prof. N. S. Gajbhiye, former Vice-Chancellor of Banaras Hindu University, Varanasi** and H. S. Gour University, Sagar was the Chief Guest on this occasion. **Dr. M. R. R. Prasad**, Scientist (Retired), ISRO, Government of India, delivered the Keynote Lecture.

**Dr. (Mrs.) P. C. Mini**, Principal of Kanoria P. G. Mahila Mahavidyalaya gave the welcome address. **Dr. (Mrs.) Kumud Tanwar**, convenor elaborated on the theme of the workshop. The workshop proceedings were released by the Chief Guest, in the presence of other dignitaries.



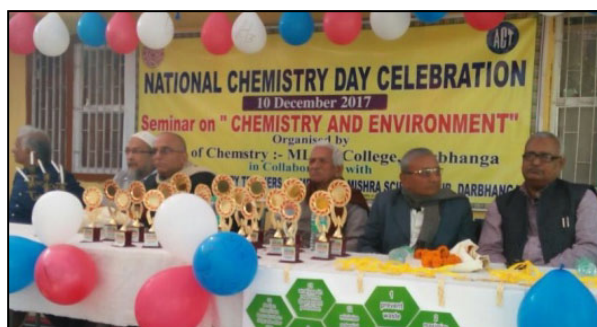
Prof. Gajbhiye enlightened the audience on the historical progress and spectrum of various instrumentation techniques and their significance in scientific research and utility in offering solutions to the industrial and societal problems. The Guest of Honor, Dr. Ashok Kumar Nagawat, Dean of Sciences, Rajasthan University, Jaipur enumerated the inter disciplinary nature of scientific and technological developments across the globe, and the important role played by these analytical tools. **Dr. Neeru Razdan**, the Organizing Secretary of the workshop presented the schedule. **Dr. Ashok Kumar Kakodia**, Co-Convener of this workshop presented vote of thanks.



More than 300 delegates consisting of students and teaching faculty from different colleges across the country have taken part in this educative workshop.

## National Chemistry Day Celebrations

**National Chemistry Day** was celebrated at **MLSM College, Darbhanga** on 9<sup>th</sup> Dec. 2017. **Prof. P.M. Mishra**, vice president ACT East zone coordinated the NCD celebrations. Speech competition was held to student participants and prizes were awarded on merit basis.



A seminar on Chemistry and Environment was also organized on the occasion.

**National Chemistry Day** Celebrations were organized at **Siddardha Junior College** and **Siddardha Degree College, P. Gannavaram**, East Godavari Dist., A.P. on 9<sup>th</sup> Dec.2017 by **Dr. P.V.S. Machiraju**, Dean R & D, Pragati Engineering College, A.P. Grace Junior and Degree Colleges, P.Gannavaram; Junior and Degree Colleges, Munganda; Junior and Degree Colleges, Ambajipeta, also participated in the NCD Celebrations.



Nearly 100 students participated in the Essay writing and Quiz programmes. Prizes were awarded to winners of the competitions and certificates were presented to the participants.

**National Chemistry Day** Celebrations were held at **Dr. Rajendra Prasad Memorial Degree College, Lucknow** on 9<sup>th</sup> Dec.2017. **Prof. Shraddha Sinha**, Secretary North zone ACT coordinated the event. **Prof. Sudha Jain**, Former President ACT was the chief guest and spoke on the importance of chemistry.



Essay competition on 'Chemistry in Everyday Life' was held and winners were awarded with prizes.



ACT and SRM Institute of Science and Technology, Ramapuram, Chennai, celebrated **National Chemistry Day** on 9<sup>th</sup> Dec.2017. **Prof. Helen P. Kavitha**, Secretary, South zone coordinated the events. Dr. K.S.Yoganand, Department of Chemistry, SRM Institute of Science and Technology and life member ACT delivered a lecture on Role of Chemistry in Everyday Life, at **Husainy High School, Ramapuram, Chennai**. Dr. S. Arul Murugan, Life Member ACT gave demonstrations on Chem Magic. The students also participated and interacted in the session.



40 students participated in drawing competition. Dr. (Mrs.) R. Kavipriya and D.N. Balasubramanian, Department of Chemistry, SRMIST, Ramapuram and Life members of ACT delivered lectures on Wonders of Chemistry at **Government High School, Ramapuram, Chennai**.

**National Chemistry Day** was organised in collaboration with ACT Teachers, Mumbai, in the **CP International School, Farrukhabad** on 9<sup>th</sup> Dec.2017. The day began with the speech of the School Principal, **Dr. U.C. Jain**, ACT EC Member on the topic “Importance of Chemistry in our Daily Life”. More than 100 students of secondary level attended this programme.



On the occasion a quiz and essay competition were organised on the topic, “Chemistry in our Daily Life” in which 400 students participated. Winners were awarded with prizes.

The Department of Chemistry, **SGB Amaravati University, Amaravati** in association with ACT, Mumbai celebrated **National Chemistry Day**, the 10<sup>th</sup> December by **Dr. Anand Aswar**, Life Member ACT. Dy. Director, Regional Forensic Science Laboratory, Amaravati as a Chief guest and Former Jt. Director (Higher Education) was guest of honor. On the eve of NCD, students have organised quiz, debate and poster competitions with a them “Chemistry of better tomorrow”.



**National Chemistry Day** Celebrations were organised by **Prof. P.V.S. Machiraju**, Vice president ACT South Zone on 11<sup>th</sup> Dec. 2017 at two venues.

Fore Noon Session at **P.R. Government College, Kakinada**. Dr. Lingaiah, Senior Scientist from IICT, Hyderabad attended as Chief Guest. Dr. P.V.S. Machiraju delivered the Key note address. 5 other colleges from Kakinada City participated in the programme. Competitions were conducted in PPT and Poster presentations, Essay writing and Quiz programmes. Prizes were awarded to the winners.

After Noon Session at **Pragati Engineering College, Surampalem**, Near Kakinada. 220 students participated in the programme. Prof. S.S. Prasad, Principal, Pragati Engineering College addressed the students. Essay writing and Elocution competitions were conducted. Prizes were awarded to the winners and certificates were presented to participants.



**National Chemistry Day**, 12<sup>th</sup> Dec. 2017, was celebrated by **Rangia College, Assam** in collaboration with ACT, on 12<sup>th</sup> Dec. 2017 at **Pragmatic Academy, Rangia**. Pragmatic Academy is a Junior College having science stream. **Dr. Gitimoni Deka**, ACT EC Member inaugurated the programme and talked about initiative of ACT towards chemistry education.

The department has arranged one open quiz competition on Chemistry and General Science amongst the students of Academy. Dr. Deka had participated as Quiz Master in quiz competition. 70 students took part in the Quiz competition. Mr. Dibjyoti Baruah, Principal, Pragmatic Academy, Ms. Mamata Lahkar, HOD Chemistry and Guest faculty Dolly Kalita were also present.

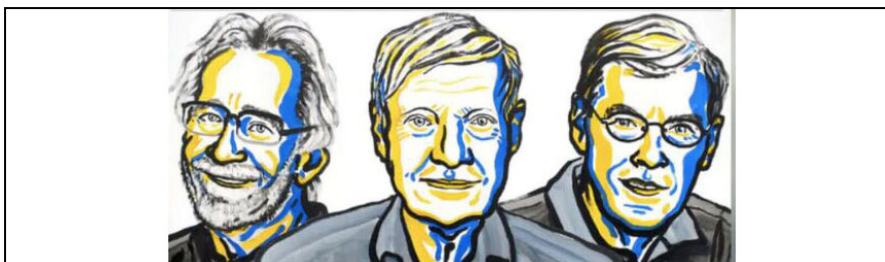


**National Chemistry Day** was also organised at **K.C. College, Mumbai** by **Dr. Hemlata Bagla**, Principal of the college on 9<sup>th</sup> Dec. 2017.

The editorial board of ACT News Letter takes this opportunity to congratulate all the organizers for motivating participants and their steps leading to popularizing chemistry.

## Views, News and more ....

### 2017 Chemistry Nobel awarded for work on cryo-electron microscopy



Jacques Dubochet \* Joachim Frank \* Richard Henderson

The 2017 Nobel Prize in Chemistry has been awarded to Switzerland-born Jacques Dubochet, Germany-born Joachim Frank, and UK-born Richard Henderson for developing Cryo-electron microscopy. The technique makes it possible to see biomolecules in 3D after rapidly freezing them around  $-150^{\circ}\text{C}$ , preserving their natural shape. It has helped scientists view biomolecule structures like that of Zika virus.

### VAJRA for Scientific Research in India

Science and Engineering Research Board (SERB) of DST launched Visiting Advanced Joint Research (VAJRA) Faculty Scheme. DST Secretary Dr. Ashantosh Sarma announced that DST is promoting combined investigations of Indian Scientists by bringing world famous R & D professionals including non-resident Indians and Overseas Citizens of India to undertake high quality collaborative research in energy, water, health, security, nutrition, materials and manufacturing.

### Sea Changing to Pink



Water in the Yencheng salt lake of China's dead sea is now slowly changing to pink. The main reason is attributed to the presence of sodium sulphate. Which is believed to interact with Dunaliella algae. The sea was main source of China's table salt. Now the lake area is attracting visitors, as the water appears green on one side and pink on the other side.

### C.N.R. Rao chosen for Von Hippel Award - 2017

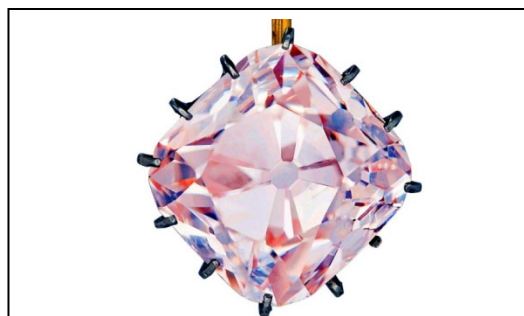
Eminent Chemist and Bharat Ratna Professor C.N.R Rao, has become the first Asian to be chosen for the prestigious Von Hippel Award. The award is the US-based Materials Research Society's (MRS) highest honour and recognises those qualities most prized by materials scientists. The award citation noted Mr. Rao's immense work on novel functional materials, including nanomaterials, graphene and 2D materials, superconductivity and colossal magnetoresistance. The award was presented in Boston on November 29 and the award includes a cash prize, trophy and a diploma.



### A Pink diamond originated from India

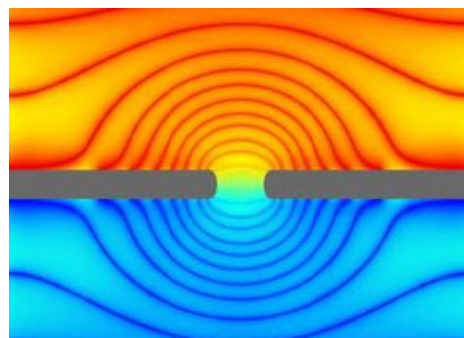
A Pink diamond originated from India was sold recently by Kristy organisation in Geneva, Switzerland. The weight of the precious pink stone is 3.814 grams and the commercial value is INR 94 Crores.

History revealed that this diamond was used earlier as ornament by French Kingdom.



### Channeling graphene to understand filtration and ion transport into cells

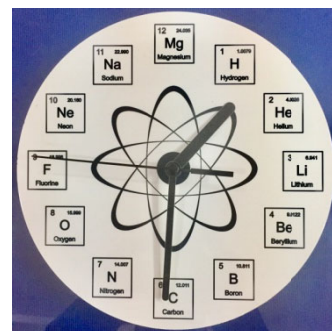
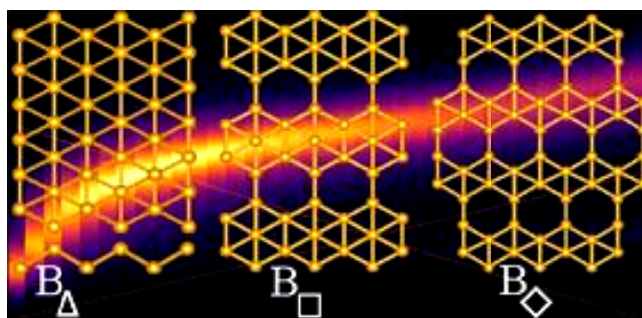
Tiny pores at a cell's entryway act as miniature bouncers, letting in some electrically charged atoms--ions-but blocking others. Operating as exquisitely sensitive filters, these "ion channels" play a critical role in biological functions such as muscle contraction and the firing of brain cells. To rapidly transport the right ions through the cell membrane, the tiny channels rely on a complex interplay between the ions and surrounding molecules, particularly water, that have an affinity for the charged atoms.



Now, researchers at the National Institute of Standards and Technology (NIST) and their colleagues have demonstrated that nanometer-scale pores etched into layers of graphene--atomically thin sheets of carbon renowned for their strength and conductivity--can provide a simple model for the complex operation of ion channels. This model allows scientists to measure a host of properties related to ion transport. In addition, graphene Nano pores may ultimately provide scientists with efficient mechanical filters suitable for such processes as removing salt from ocean water and identifying defective DNA in genetic material (Source : Nanoletters-2017).

### Atom thick film of Boron

Rice University scientists calculate that the atom-thick film of boron known as borophene could be the first pure two-dimensional material naturally able to emit visible and near-infrared light by activating its plasmons. The Rice team tested models of three polymorphs and found that triangular borophene, at left, was capable of emitting visible light, while the other two reached near-infrared (Source : chemeurope.com).



*We conclude the present issue of the ACT News Letter here*





## Release of ACT News Letter at NCCT-2017



**Dr. Mannam Krishnamurthy**, *Editor, ACT News Letters,*  
**Prof. P.V.S. Machiraju**, *Convener, NCCT-2017,*  
**Prof. S. Sambhu Prasad**, *Principal Pragati Engineering College, Surampalem,*  
**Mr. M. Sathish**, *Chief Guest, Concluding session of CEPT-2017,*  
**Prof. D.V. Prabhu**, *General Secretary ACT, Wilson College, Mumbai,*  
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