

# Department of Chemistry

## Activities – 2022-2023

1. Department of chemistry, Ch SD St Theresa's college for women (A) Eluru, organised a **workshop** on " Instrumentation of UV - Visible Spectrophotometer" as a part of IICell self driven activity on 21<sup>st</sup> & 22<sup>nd</sup> July 2022. Around 12 Faculty members and 80 students attended and acquired knowledge of the principle involved and had hands-on experience. Mr Raja Sekhar, Engineer, Shimadzu is the resource person. Using UV- Visible spectroscopy is very common to find the information about the plasmonic resonance of the nano particles. Confirmation of Silver nano- particle formation can be found by analysing the absorbance data of UV- Visible spectroscopy.



2. Department of Chemistry, Ch SD St Theresa's college for women (A) Eluru, organised Training cum Live Certification program in collaboration with IICell and IQAC in association with Makeintern & Entrepreneurship Cell, IIT Kharagpur on 1st& 2nd Aug 2022. Nearly 75 students both from UG & PG and 10 faculty members attended and took active participation in the program. The resource person is Dr Giridhar Reddy, AMRITA, Viswa Vidyapeetam, Bangalore. The program is an eye opener to the students creating awareness about the importance of Nano particle, their synthesis and it's applications in different fields with special reference to Medicine.



3. Department of Chemistry organized a Guest lecture on “ Exciting future and Career opportunities in Quality Control with Chemistry” on 13 th August 2022. The resource person was Mr Naga Raju Banda, Vice- President, Leiutis Pharmaceuticals, Hyderabad. He started with the importance of Chemistry in our daily life and created awareness about the applications of Chemistry in various fields with a special reference to Quality Control of Pharmaceuticals. He presented all the interesting and exciting career opportunities with Chemistry. Nearly 20 students from PG Organic Chemistry participated and benefited.



4. Investiture ceremony for the academic year 2022-2023 was organized by the department of Chemistry on 13.09.2022. The Student union is truly a representative body. The Student union formally takes the oath of office at a solemn and sacred Investiture Ceremony, where they promise to uphold the values and traditions of this great Institution, pledging to take it to even greater heights. It is indeed a milestone in their lives. When the students take their oath at the Investiture they make a vow to always keep the faith, to stand for what is just and right, to be upright and honest in all their actions and to keep Ch SD St Theresa's college banner flying high. The students union office bearers and class representatives of both UG & PG took oath which is a serious declaration. Chief Guest Dr KS Nathaniel, Principal, Model Degree college, Kamavarapukota addressed the gathering and congratulated the leaders. Dr Sr Marietta Pudota, Correspondent of the college conveyed her blessings. Dr Sr Mercy, Principal of the college gave an inspirational message. Sr Rajitha, Vice- Principal, Sr Suseela Pg Director and Controller of Examinations, all the faculty and students participated in the solemn ceremony.





5. International Day for the Preservation of the Ozone Layer is celebrated on September 16 every year. The theme of World Ozone Day 2022 is “Montreal Protocol@35: global cooperation protecting life on earth”. In view of the International Ozone day different programs will be organised to create awareness about the reasons for the depletion of Ozone layer , how to reduce ozone layer depletion and how to repair it. On this occasion, Department of UG Chemistry organised PPT Competitions as a FOCUS Club activity on 17.09.2022. Students took active participation in the competitions and gave excellent presentations. MSc Organic Chemistry students presented a Mime depicting Do’s and Dont’s for the preservation of Ozone layer in a beautiful way. At the end of the programme they took pledge to protect all forms of life on the earth and to make sincere efforts for the preservation of the ozone layer for our benefit and the benefit of our future generations. They resolved to boycott ozone depletion causing products and use only eco-friendly products and services. They decided to continue these activities which reduce the consumption of ODS and thus contribute to the fight against Ozone depletion.





6. Dr CA Jyothirmayee and Dr N Gayatri Devi attended a one – day state level workshop on INDIA RANKINGS - 2023 conducted by Quality Assurance Cell, APSCHE at Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijayawada on 21st Nov 2022.



7. Dr K Kiran Kumar, Assistant Professor, Department of Chemistry delivered a Guest lecture on “The importance of Research in the field Science and Technology” to the I MSc Organic Chemistry students on 30.11.2022. The talk was very interesting and thought provoking. The students were enlightened and motivated towards taking up research.



# MOU

The Memorandum of Understanding is made on the 30 th November, 2022 between Department of Chemistry, K.B.N. College (Autonomous), Vijayawada, and Department of Chemistry, Ch.S.D.St. Theresa's College for Women (A), Eluru. The areas of cooperation may include, subject to mutual consent, any desirable and feasible activity that would further achieve the goals of each institution. Such interaction may include cooperation in a variety of joint academic and educational activities such as:

- ❖ Faculty and student exchange Programmes
- ❖ Staff Professional Development Programmes
- ❖ Collaborative conferences, workshops, and training programmes
- ❖ Team taught courses, invited talks including online courses and
- ❖ Visits by faculty, supporting staff and students



## 2022 PATENTS

1. Dr.V.Nagalakshmi published a patent on “Metal complexes and composition with novel Synthesis, Characterization, and Properties of Binuclear Gold(I) Phosphine Alkynyl Complexes” with the patent office journal number 05/2022 dated on 04th February 2022. This patent was filed on 12th January, 2022 with application number 202241001883 A in collaboration with Dr. Kumara Swamy Jella, Associate Professor, Department of Chemistry, Chaitanya Deemed to be University, Hanamkonda, Warangal, Telangana, India, Pincode:506001.
2. Dr.K.SwarnaLatha published a patent on “METHOD FOR THE SYNTHESIS OF MIXED METAL NANOSCALE COMPOSITES USING LOW COST PRECURSORS” with the patent office journal number 07/2022 dated on 18th February 2022. This patent was filed on 22nd January, 2022 with application number 202221003745 A in collaboration with Dr. Wasudeo Balaji Gurnule, Professor, Department of Chemistry, Kamla Nehru Mahavidyalaya,Nagpur, Maharashtra, India, Pincode: 440024
3. Dr.V.Nagalakshmi published a patent on “Predict the occurrence of radiation fog using statistical and ML models” with the patent office journal number 24/2022 dated on 17th June, 2022. This patent was filed on 28th May, 2022 with application number 202241030690 in collaboration with Dr. Rajesh Kanna M.R, Associate Professor, Department of Mathematics, Sri D.DevarajUrs Government First Grade College, Hunsur, Karnataka, India, Pincode:571105 Hunsur.
4. Dr.V.Nagalakshmi published a patent on “METHOD FOR DETECTION AND QUANTIFICATION OF TARGET BIOMOLECULES” with the patent office journal number 24/2022 dated on 17th June, 2022. This patent was filed on 13th June, 2022 with application number 202241033642 in collaboration with Dr. B. B. V. Sailaja, Associate Professor, Department of Chemistry, Andhra University, Visakhapatnam, Andhra Pradesh, India, Pincode: 530003,Visakhapatnam
5. Dr.C.A.Jyothirmayee published a patent on “DESIGNING A NANOSTRUCTURED PHOTOVOLTAICS ON SOLAR PANELS TO INCREASE THE EFFICIENCY OF SOLAR ENERGY UTILIZATION” with the patent office journal number 29/2022 dated on 22nd July, 2022. This patent was filed on 11th July, 2022 with application number 202241039620 in collaboration with VIJAYALAKSHMI K, ASSISTANT

PROFESSOR, DEPARTMENT OF EEE, SRMIST RAMAPURAM CAMPUS  
Chennai

6. Dr.N.Gayatri Devi published a patent on “ COMPARE AND CONTRAST THE PROS AND CONS OF TOXICITY LEVELS OF BISMUTH PEROVSKITE BASED SOLAR CELLS AGAINST LEAD-BASED ONES” with patent office journal 39/2022 dated on 30th September 2022. This patent was filed on 19th september 2022 with application number 202241053601 in collaboration with SARVANI JOWHAR KHANAM , RESEARCH SCHOLAR,UNIVERSITY OF HYDERABAD, HYDERABAD

## **COPY RIGHTS**

1. Determination of water quality index of drinking water sources with special reference to Denduluru mandal of West Godavari District, AP, INDIA – Diary No: 14304/2022-CO/L - By Dr C.A. Jyothirmayee.