

CH SD ST THERESA'S COLLEGE FOR WOMEN (A), ELURU

Department of Chemistry

Annual Report- 2022- 2023

College was reopened on 13th June 2022 for the academic year 2022-23. A general body meeting was conducted by Principal Dr.Sr.P.Mercy for the faculty members and assigned the duties such as time table setting, work load allotment and planning of department activities for the academic year 2022-23. Classes started on 13th June 2022 for II & III year degree students and on 1st August 2022 for I Year degree students.

Work load of UG Chemistry was distributed equally among 7 members and PG Chemistry was distributed equally among 3 members of the department. Annual plan was discussed & classes taken accordingly. Faculty members are regular and punctual in taking classes and completing the syllabus on time.

To improve the subject knowledge and skills of average and above average students, different teaching and learning methods were implemented. Some of them are Power point presentations, Seminars, Discussions, Quiz Programmes etc., For the slow learners Field study, Group study, Question & Answer sessions methods were implemented during remedial coaching.

Department of Chemistry – Activities – 2022-2023

17th June 2022: BOS meeting

UG BOS meeting - The Boards of Studies meeting in Chemistry was held on Friday 17.06.2022 at 11.00 a.m. in the UG Department of Chemistry through online mode in Google meet. Dr.B. Jagan Mohan Reddy, Assistant professor, Dept of Chemistry, College of Science and Technology, Adikavi Nannaya University, Rajamahendravaram as University Nominee, Dr.K.A Emmanuel, Lecturer in Chemistry, Govt.Degree College, Kaikaluru as External subject expert, Dr. CA Jyothirmayee, HOD of Chemistry as Chair person, and all other members of the department as internal subject experts and two Student Representatives attended the BOS Meeting.

PG BOS meeting - The Boards of Studies meeting in Chemistry was held on Thursday 16.06.2022 at 10 a.m. in the PG Department of Chemistry through online mode in Google meet. Dr.K. Deepthi, Assistant professor, Dept of Chemistry, College of Science and Technology, Adikavi Nannaya University, Rajamahendravaram as University Nominee,

Dr.K.Kiran Kumar, Lecturer in Chemistry, KBN College, Vijayawada and Dr. Mallikarjun, Lecturer in Chemistry, Govt Arts and Science college, Rajamahendravaram as External subject expert, Dr. CA Jyothirmayee, HOD of Chemistry as Chair person, and all other members of the department as internal subject experts and two Student Representatives attended the BOS Meeting.

28th June 2022 : CSP Project viva for II BSc 2020-21batch – External Viva Panel member

Dr.KVSK Madhavi Rani, Lecturer in Zoology acted as external panel member and Dr.CA Jyothirmayee, HOD of Chemistry acted as internal viva panel member. 48 students were guided by Chemistry faculty members.

Topic: Project work on water facilities and drinking water availability in the respective residential area.

5th July 2022: CSP Project viva for I BSc 2021-'22 batch– External Viva Panel member –

Dr. Neeraja, Lecturer in BioChemistry (UG), Mrs.Jyothi, lecturer in Mathematics (PG) acted as external panel member and Dr.CA Jyothirmayee acted as Internal viva panel member. 40 students were guided by Chemistry faculty members.

Topic: Project work on water facilities and drinking water availability in the respective residential area.

Workshop on " Instrumentation of UV - Visible Spectrophotometer"

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 21st & 22nd 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.



29th & 30th July 2022: Project Viva – External viva Panel members:

Dr.K Sreelatha, Lecturer in Physics acted as external panel member and Dr.CA Jyothirmayee, HOD of Chemistry acted as Internal viva panel member. 70 students are guided by the Chemistry faculty members.

Topics:

- 1) Synthesis of Iron Nano particles from Bottle gourd leaves
- 2) Synthesis of Iron Nano particles from Amla leaves
- 3) Synthesis of Iron Nano particles from Papaya leaves
- 4) Synthesis of Iron Nano particles from Aloevera leaves
- 5) Synthesis of Iron Nano particles from Mango leaves
- 6) Synthesis of Iron Nano particles from Moringa leaves
- 7) Synthesis of Iron Nano particles from Gooseberry leaves
- 8) Synthesis of Iron Nano particles from Curry leaves
- 9) Synthesis of Iron Nano particles from Neem leaves
- 10) Synthesis of Iron Nano particles from Spinach leaves

- 11) Synthesis of Iron Nano particles from Beetle leaves
- 12) Synthesis of Iron Nano particles from Vincarosea leaves
- 13) Synthesis of Iron Nano particles from Tea leaves
- 14) Synthesis of Iron Nano particles from Tulasi leaves
- 15) Synthesis of Iron Nano particles from Hibiscus leaves
- 16) Synthesis of Iron Nano particles from Henna leaves

Training cum Live Certification program in collaboration with IICell and IQAC in association with Makeintern & Entrepreneurship Cell, IIT Kharagpur

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 its applications in different fields with special reference to Medicine.





Guest lecture on “ Exciting future and Career opportunities in Quality Control with Chemistry”

Department of Chemistry organized a Guest lecture on “ Exciting future and Career opportunities in Quality Control with Chemistry” on 13th 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.



Investiture ceremony for the academic year 2022-2023

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.



International Day for the Preservation of the Ozone Layer

International Day for the Preservation of the Ozone Layer is celebrated on September 16th 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.

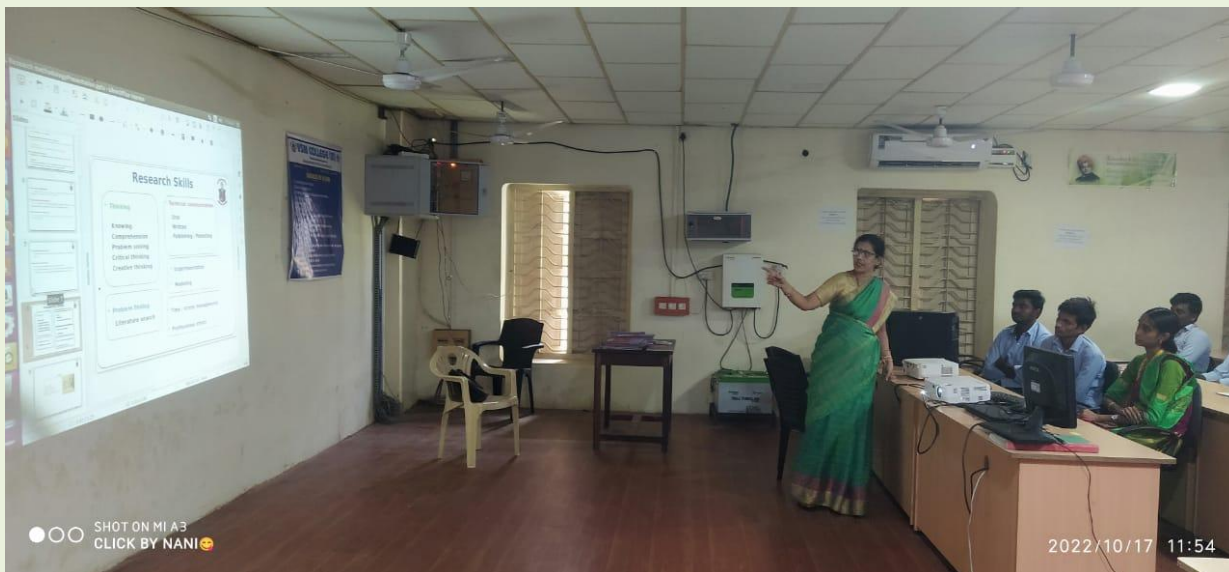


Guest Lecture on Research Methodology

The Guest Lecture on Research Methodology was organized by department of Chemistry for all the students pursuing Masters of Chemistry. The objective behind organizing the

lecture was to enlighten the students about the theoretical and practical aspects of doing research at Masters level.

The guest lecture was scheduled on **13.10.2022** presided over by Dr. V. Naga lakshmi who is currently serving as Lecturer in chemistry, Ch..S.D.St.Theresa's College (A),Eluru. Speaking on the occasion, Dr. V. Naga lakshmi started the session on a very critical note by stating that *Research must be construed as an action and it is translation of knowledge into action.*



The speaker attached immense respect to the idea of research and explained how a good research facilitates in the development of the science. The speaker further highlighted as to

the attributes and duties of a critical scholar and how the same would affect the quality of research. Some of such attributes includes being scientifically faithful with the research, objectivity, potential to edit the document and ensuring proper acknowledgement of the sources from which relevant ideas have been taken for carrying out the research. The speaker explained all the aspects with the help of illustrations and examples that provided a clearer understanding to the students with regard to the various concepts that were discussed.

Field trip to Shree Icon Pharmaceutical Laboratories, Vijayawada

On 26th October 2022, two faculty members from Department of Chemistry along with 30 students from III BSc visited Shree Icon Pharmaceutical Laboratories, Vijayawada. Field trips help students interact with what they are learning. There may be lab experiments or filed model studies in the class room, but they are in no way match with the field scenario. Hence class room exercises or text books cannot replace field work and in-fact they are more important than the class room teachings. Hands on training are highly important in subjects which are application oriented. The experience goes beyond reading about a concept; students are able to see it, manipulate it and participate in it physically. Students are able to see elements with their eyes rather than reading about it and believing what they are told. The field trip improved the critical thinking of students, experiential learning took place, students world view is expanded, greater bond developed between faculty and students and students are encouraged & motivated to take up internships & research in Chemistry.





Theresian Mission fete

12th November 2022: Theresian Mission fete – On the eve of Theresian mission fete Chemistry department organized a snacks stall “Pani poori”, “HOT - Mixture” and games are “Coin in the bucket and One minute”.

One – day state level workshop on INDIA RANKINGS – 2023

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.



GUEST LECTURE, by Dr.M.Rama, Lecturer in chemistry on 29-11-2022 at BVK College, Visakhapatnam.

Topic: Quantitative analysis in analytical methods in Chemistry-I.

Analysis of a substance with respect to quantity is regarded as quantitative analysis. Volumetric analysis is one of the ways to determine the quantity of the component to be determined in the given sample. Based on the nature of compound the analysis will be carried out in different ways such as

a) Acid-Base titrations

b) Redox titrations

c) Precipitation titrations and d) Complexometric titrations.



1. Guest lecture on “The importance of Research in the field Science and Technology”

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.



2. The Memorandum of Understanding

The Memorandum of Understanding is made on the 30th 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



GUEST LECTURE, by Dr.M.Rama, Lecturer in chemistry on 02-12-2022

Dept. of Chemistry, Ramachandra College of Engineering , Eluru.

Topic: Awareness talk on Environmental pollution and measures to control it on the eve of National pollution control day.

Report

Environment is the place where we live in, but it is getting polluted by man made things and nature too. Student can do small things to reduce the pollution to some extent in their surroundings. Students can aware the people in their surroundings about the materials which make environmental pollution like use of fossil fuels, burning of garbage, throwing single use plastics in water bodies and in soil etc. Plant and grow the saplings is the best way to reduce pollution.



3. 15 Days Workshop Cum Internship

Department of Chemistry organized 15 Days Workshop Cum Internship on “Instrumentation and Analytical Techniques in Chemistry” in collaboration with Shree ICON Pharmaceutical Laboratories, Vijayawada from 18th Jan to 3rd Feb 2023. The objective of the workshop is to train the staff and students with advanced analytical techniques. This included a detailed theoretical background, practical training and a critical understanding of the laboratory-based techniques they apply during their research projects. The course delivered an in-depth examination of the specific analytical techniques relevant to their research project. Mr Narendra and Mrs Rajeswari from “Shree ICON Pharmaceutical Laboratories”, Vijayawada are the resource persons. Nearly 60 students and 10 Faculty members are trained and given hands – on experience. These Analytical techniques are used for the detection, identification, characterization, and quantification of chemical compounds. These methods are commonly used in biology for research, development, and quality control of pharmaceutical products.





23rd January 2023: College open day - Inter campus students

College Open day is an event in which an organization (such as a school or college) invites the public to visit in order to see the things that happen there. An open day is when a college opens its doors to prospective students, letting to take a good look at the learning facilities, accommodation and social spaces. Local students get to speak to lecturers and student ambassadors to get a better idea about the potential degree programme and life on campus.

College open day was organized by IQAC of Ch SD St Theresa's college for women (A) Eluru, on 23rd January 2023. The program started with prayer followed by the warm and hearty welcome by Principal Dr Sr Mercy. P, addressing the gathering explaining the NEP 2020. Dr A. Nirmala Jyothsna HO Dept of Physics and electronics presented how the college plays a major role in the personality development of students. Dr Celine Rose, HO the Dept of Physical Education presented the importance of co-curricular and extracurricular activities.

The students visited the exhibition organized by all the departments. Finally the program came to an end by a Quiz competition organized by Mrs. Vyshnavi, Faculty, Dept of English, giving away prizes followed by feedback from the students. The whole programme was coordinated by Sr Rajitha, Vice- Principal of the college and compered by Dr CA Jyothirmayee, IQAC Coordinator and HO Dept of Chemistry.

3rd February 2023 at 2 pm: PG BOS meeting Organized

4th February 2023 at 2 pm: UG BOS meeting Organized

UG BOS meeting - The Boards of Studies meeting in Chemistry was held on Friday 04.02.2023 at 2PM in the UG Department of Chemistry through online mode in Google meet. Dr.Chenna Rao, Assistant professor, Dept of Chemistry, PR Govt College , Kakinada as University Nominee, Dr.K.Rayapa Reddy, Associate professor, Dept of Chemistry, Andhra Loyola College, Vijayawada as External subject expert, Dr. CA Jyothirmayee, HOD of Chemistry as Chair person, and all other members of the department as internal subject experts and two Student Representatives attended the BOS Meeting.

PG BOS meeting - The Boards of Studies meeting in Chemistry was held on Thursday 03.02.2023 at 2pm in the PG Department of Chemistry through online mode in Google meet. Dr.M. Manoranjani, Assistant professor, HO Dept of Chemistry, PB Siddhartha Arts and

Scvience college, Vijayawada as University Nominee, Dr.Ch. Venkateswara Rao, Lecturer in Chemistry, YN College, Narsapuram as External subject expert, Dr. CA Jyothirmayee, HOD of Chemistry as Chair person, and all other members of the department as internal subject experts and two Student Representatives attended the BOS Meeting.

24th February 2023: College day activity

College day was celebrated on 24th February 2023. Department of Chemistry encouraged and prepared students from III BSc to perform a Mime with the theme – Save water and save life.

National Science Day celebrations 2023

In 1986, the Government of India, designated 28th February as National Science Day to commemorate the announcement of the discovery of the “Raman Effect”. This year's edition is being celebrated under the theme of “Global Science for Global Wellbeing”, in light of India's G20 presidency.

National Science day: Activities

- Various science projects will be presented by students from various colleges and schools.
- The most recent discoveries from both national and state science institutions are presented.
- Stargazing, live projects, debates, quiz competitions, lectures, public speeches, radio and television talk shows, science movie exhibitions, and other activities round out the celebration.

The theme of national science day 2023 is "Global Science for Global Wellbeing," which reflects the nation's increasing international visibility and significance. As a part of National Science Day celebrations, on 28th February 2023, Department of Chemistry organized PPT competitions as a Focus club activity. Most of the students participated in the competition.





4. Workshop on “Innovative ideas on startups” 31st March 2023 -

Objective:

Workshops provide an opportunity to explore current topics, hands-on training, and practical application. Workshops help a person to develop a new skill set for their better future. Moving into a new home is an exciting time and keeping the home is essential. Making a list of the essential items you need is important. There are some things that everyone thinks of when it comes to home essentials. Cleaning supplies are a must. Multi-purpose cleaner, disinfectant, liquid soap, hand wash, washing powder are some products. The main objective of the workshop is to equip the students with the cost effective and quality product preparation of the essential Home needs in order to enable them to start small scale industry.

Benefit:

All the students took active participation, had hands on experience. They all are equipped with the process of preparation. Business techniques are also explained to the participants.

Report:

Dr.V.Nagalakshmi, the resource person motivated the students about startups and ideas by taking the live examples. Startup equation involves innovation, technology, passion. All the qualities to be developed to start a new business or startups. Even though preparation of home needs is a old one, now a days it can be developed in thinking differently. Later she demonstrated the preparation of phenyl, surf, soap oil and hand wash with the help of 16 students. She explained the raw materials and procedures for those cleaning reagents. She encouraged the students to think out of the box and differently. Students participated with

enthusiasm and actively interacted. The session was concluded by appreciating A.R.N.L.Sireesha and Y.Rajani who were the driving force of entire program.

Youtube Video url: <https://youtu.be/Q2XFz2EIndQ>





Two - Day workshop on "Curriculum development for 4th year of 4- year UG Honours programmes"

Dr CA Jyothirmayee, HO Dept of Chemistry is privileged to be a part of Fourth year Degree Honours Curriculum framing of Chemistry and attended a Two - Day workshop on "Curriculum development for 4th year of 4- year UG Honours programmes" at Andhra Loyola College, Vijayawada on 10th and 11th March 2023 conducted by Andhra Pradesh State Council of Higher Education in association with Andhra Loyola College.



14th March 2023 - Department meeting

Annual department meeting was held in the Chemistry department to evaluate the annual performance of the department academically, in view of research, result, internships and extension activities. Principal Dr.Sr.Mercy interacted with the faculty and discussed the department highlights. She appreciated the staff for the initiation taken to develop start-ups generating funds.



5. International day of Happiness:

The theme of International Day of Happiness 2023 is 'Be Mindful, Be Grateful, Be Kind'.

On the occasion of celebrating The **International Day of Happiness** on 20th March 2023 at Ch SD St Theresa's college for women (A), Eluru, Mr MP Janaki Ram, Counseling Psychologist, Mind Moral counseling centre, Palakollu, State adviser, APA India, mentioned that a person needs just three things to be truly happy in this world: **“Someone to love, something to do, and something to hope for.”** If you want to be happy, do not dwell in the past, do not worry about the future, focus on living fully in the present.

Mrs.Venkata Lakshmi, Counseling Psychologist, Kushala Counseling centre, Eluru addressed the gathering saying that, **“Our world is facing major challenges, and supporting people's wellbeing should be our top priority. Kindness is the key to a happier world for all of us”**. Altogether 400 students and staff participated in the programme. Dr CA Jyothirmayee, IQAC Coordinator organized the programme.



6. World water day celebration-Department of Chemistry

The United Nations general assembly adopted a resolution by which 22nd March of each year was declared world day for water, to be observed starting since 1993. The aim of water day is to highlight the importance of fresh water and awareness about saving water. The day aims to bring attention to the global water crisis and the need to sustainably manage freshwater resources. And because water affects us all, we need everyone to take action. By means of water, we give life to everything. Water is life's matter and matrix, mother and medium. There is no life without water.

Slogan of World Water Day: Life without water is impossible. Save water. Save life

The theme of world water day 2023 is “**Accelerating change to solve the water and sanitation crisis**”. On 23rd March 2023, Department of chemistry organized Quiz and Poster painting Competitions as part of the world water day celebration and Focus Club

Activity. 09 members participated in Poster Painting and 30 members participated in the Quiz competition and bagged Prizes. Ms N Madhavi organised the Quiz competition.



7. Workshop on “Innovative ideas for startups” on 31.03.2023- Dept of Chemistry.

Dr.V.Nagalakshmi, the resource person motivated the students about startups and ideas by taking the live examples. Startup equation involves innovation, technology, passion. All the qualities to be developed to start a new business or startups. Even though preparation of home needs is a old one, Now a days it can be developed in thinking differently. Later she demonstrated the preparation of phenyl, surf, soap oil and hand wash with the help of 16 students. She explained the raw materials and procedures for those cleaning reagents. She encouraged the students to think out of the box and think differently. Students involved in the program with enthusiasm and actively interacted. The session was concluded by appreciating A.R.N.L.Sireesha and Y.Rajani who were the driving force of entire program. Nearly 250 students and 8 faculty members Participated in the program.





8. World Earth day Celebrations:

Earth Day is an annual event on April 22 to demonstrate support for environmental protection. First held on April 22, 1970, it now includes a wide range of events. Earth Day is a celebration of the earth and our environment. It is a historical event that takes place every year. The purpose of Earth Day is to bring awareness to the environmental issues our planet faces and to promote solutions for a sustainable future. Participating in this global event raises awareness of the importance of protecting our planet and its natural resources. The theme for Earth Day 2023 is "Invest in Our Planet." As a part of

World earth day celebrations, awareness program “ Srujanotsav” was conducted by the Department of Chemistry in the form of Mime: Save water – Save life and a dance performance on –Save trees.



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

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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.

Text Book Published

1. Dr V Nagalakshmi, Associate Professor in Chemistry published a text book - Basic concepts of Chemistry.

