

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

LAVOISIER CHEM ASSOCIATION ACTIVITIES (2024-2025)

The PG & Research Department of Chemistry, Holy Cross College, inaugurated the Lavoisier Chem Association activities for the academic year 2024-2025 on June 24, 2024. **Dr. K. SETHURAMAN** was the chief guest. The meeting commenced with a prayer followed by the welcome address by Ms. R. GOBIKAA (III B.Sc. Chemistry 'A'), Association Secretary of the Lavoisier Chem Association, and Ms. P. APARNA (II M.Sc. Chemistry), the Joint Secretary of the Lavoisier Chem Association, read the minutes of the previous meeting. The resource person spoke on the topic " **ORGANIC ELECTRONIC DEVICES.**" The resource person emphasized the types of OLEDs, working mode of OLEDs, low carrier injection system, high carrier mobility and applications of OLEDs. Nearly 290 students of I UG, II UG, III UG, I PG, and II PG of the chemistry department actively participated and benefited from this session. The session ended with a formal vote of thanks delivered by Ms. J. ROMAIN SAMANTHA CORERA (II B.Sc. Chemistry 'B'), Assistant Secretary of the Lavoisier Chem Association.

One-day workshop on "Preparation of Chemical reagents and Laboratory safety measures" was conducted by the Department of Chemistry, Holy Cross College, Trichy on 28th June 2024 for newly Recruited Staff and Non –Teaching Staff of various colleges such as Bon Secours Arts and science college for women, Mannargudi, Bon Secours Arts and science college for women, Tanjore, Nehru Memorial College, Puthanampatti, Government arts college, Thuvakudi, Swami Dayananda College of Arts and science, Mannargudi, Cauvery College for women, Trichy, Jesu Arts and science College, Pudukottai. The aim of the workshop was to educate participants about essential safety protocols and practices in the chemistry laboratory, emphasizing the prevention of accidents, the handling of hazardous materials and the promotion of a safe working environment. Dr. K. Ramesh, Syndicate Member, BDU, Librarian, Rajah's College, Thiruvaiyaru was the chief guest of the work shop. Dr. A. Leema Rose, Associate Professor & Head of the Chemistry department, Former Syndicate Member- Bharathidasan University and Convener of this workshop welcomed the gathering, in which participants from nearly 10 colleges attended. Dr. K. Ramesh delivered the Keynote address. He emphasized the usage of minimum chemicals to avoid environmental pollution and various safety measures to be followed in the handling of chemicals. Dr. A. Leema Rose spoke on basic laboratory skills and laboratory safety measures in the first session.

The manual on “Preparation of Chemical reagents and Laboratory safety measures” was given to the participants which consists of microscale practical procedures in organic, inorganic and physical chemistry compiled by the faculty of the Department of Chemistry. Green chemistry practical in organic, inorganic and physical chemistry were demonstrated to the participants by the faculty of the Department of Chemistry. In the Valedictory function, Dr. Sr. P. Rajakumari., Principal, Holy Cross College (Autonomous), Trichy presided over the function and offered felicitation. The participants highly appreciated the efforts taken by the faculty of the Department. In the feedback session, they acknowledged that the one-day workshop was well organized and the demonstrations and explanations were very useful. They congratulated and thanked the department for exposing them to new green techniques by replacing the hazardous H_2S by Na_2S and highly explosive sodium metal by zinc-dust sodium carbonate fusion mixture. The micro level organic and inorganic analysis using less chemicals were really appreciated by the participants. They also ensured the effective implementation of the skills in their educational institutions. Certificates were distributed to the participants. Dr. S. Margrat Sheela, Assistant Professor and Organizing Secretary, delivered the vote of thanks.

The PG & Research Department of Chemistry organized an alumna interaction on 6th July, 2024. Dr. Sri Ranjini Arumugam, Head- Projects Administration, XEEDQ GMBH, Leipzig, Germany was the chief guest. The meeting commenced with a prayer followed by the welcome address by Maheesa Banu.K and the minutes of the previous meeting was read by Gopikaa R, (III B. Sc Chemistry ‘A’ Sec). The resource person spoke on the topic “**CAREER BUILDING IN SCIENCE: CREATE YOUR LADDER**”. She emphasized on the selection of career path after UG and PG course in detail. She underlined the fellowships and scholarships available for the students to complete their higher studies and research fields. She also mentioned the job opportunities available in abroad for chemistry graduates. Students clarified their doubts regarding their career path. Overall, the session was highly informative and had a big impact on the students. All the final year UG and PG students were benefitted. The meeting ended with the formal vote of thanks by Bavithra M (III B. Sc Chemistry ‘A’ Sec).

The PG & Research Department of Chemistry organized an awareness programme on the topic “**ESSENTIAL FIRE SAFETY PRACTICES**” on 16th July, 2024. **CAPTAIN R.S. JEGADEESAN** was the chief guest. The meeting commenced with a prayer followed by the welcome address by DIVYABHARATHI. K, (II M.Sc. CHEMISTRY) and the minutes of the previous meeting was read by A. FEBI CATHRIN, (II B. Sc Chemistry ‘A’ Sec). The resource

person taught the students about LPG fuels, their forms of existence, types and storage. Awareness on precautions of LPG usage, their warranty and frequent maintenance of cylinder, regulator and rubber tubes were emphasized. He also demonstrated the precautionary steps to be taken during gas leakage from cylinder. The resource person conducted quiz for students to test their knowledge about LPG handling and awarded prizes for the first 3 winners who secured the best. The students actively participated in the session and learnt many new details about LPG. Nearly 50 students participated and got benefitted by this session. A formal vote of thanks was proposed by NAGAILLAKIYA K, (II M.Sc CHEMISTRY) to end the meeting.

The Lavoisier Chem Association of the PG & Research Department of Chemistry, organized a programme on the topic “**SOLID WASTE MANAGEMENT**” on 20th July 2024. **Dr. UDHAYA BANU** was the chief guest. The meeting commenced with a prayer followed by the welcome address by Ms. Aparna P (II M.Sc. Chemistry), and the minutes of the previous meeting was read by Ms. Gobikaa R (III BSc Chemistry A Sec), the Secretary of the Lavoisier Chem Association. The guest speaker enlightened us with her captivating speech. Proper waste management is a critical element for sustainable growth and development for any society. She emphasized that solid waste directly affects human health, air and water quality, and contribute to global efforts to combat climate change. Hence, embracing sustainable waste management practices from proper segregation, recycling, composting, and waste-to-energy initiatives is not only beneficial for the environment, but also economically viable for nations and corporations alike. She also spoke about various classifications of solid waste and recycling methods to reduce the solid waste. The session was very effective and had a significant impact. Around 140 students from the III UG and PG attended, actively benefiting from this session. The session concluded with a formal vote of thanks delivered by Ms. Nagaillakiya K ((II M.Sc. Chemistry).

The Lavoisier Chem Association, PG & Research Department of Chemistry organized a programme on 24th July, 2024. **Dr. RICHARD PREM KUMAR**, Assistant Professor of Chemistry, Bishop Heber College was the chief guest. The meeting commenced with a prayer followed by the welcome address by Natheesha R, (III B.Sc Chemistry ‘B’Sec) and the minutes of the previous meeting was read by Samantha, (II B. Sc Chemistry ‘B’ Sec). The resource person spoke on the topic “**VICTORY AHEAD: MOTIVATIONAL GUIDANCE FOR COMPETITIVE EXAMS**”. He emphasized the importance of IIT-JAM, NET and GATE exams. He also explained the question pattern, mark allocation of these exams and

instructed about the number of IITs, NITs in India and abroad. Students clarified their doubts regarding their career path. Nearly 150 students were benefited by this session. The meeting ended with the formal vote of thanks by Rithika S, III B.Sc Chemistry 'B' Sec.

The PG and Research Department of Chemistry, Holy Cross College (Autonomous) Trichy in association with Rotary Club of Tiruchirappalli Diamond City and Rotary Club of Srirangam, organized a chemistry exhibition "CHEM EXPO – 2024" on 6th and 7th August 2024. The science exhibition with the theme "Planet Vs Plastics" was inaugurated by Rotarian. S. Michael Judy, Assistant Governor RID 3000, Renewable Energy Consultant. The exhibition was presided over by Rev. Sr. Dr. Sarguna, Secretary and Rev. Dr. (Sr.). Rajakumari. P, Principal, Holy Cross College, Trichy. The theme, 'Planet vs Plastics', emphasizes the critical nature of protecting our environment and conserving natural resources, while also spotlighting the importance of shifting towards sustainable and renewable energy sources, moving away from fossil fuel dependency. The main objective of this exhibition is to promote widespread public awareness of the damage done by plastic to humans, animals, and to all biodiversity demanding more research be conducted on its health implications, including the release of any and all information regarding its effects to the public and investing in innovative technologies and materials to build a plastic-free world. The undergraduate and postgraduate students of Chemistry Department exhibited various static and working models on different topics related to the theme like origin of plastics, evolution of plastics, plastic pollution, reduce, recycle and reuse of plastics – construction of roads from plastic waste, electricity from plastic wastes, fuel from plastics, compost from plastic wastes and ecofriendly alternatives to plastics – bioplastic as a substitute for plastic in construction, alternatives for plastics in food packing industry, sustainable solutions to plastic use in health care and reduction of single use plastic in college campus. 1010 students from various schools in and around Trichy along with the teachers visited the exhibition. Students from Bishop Heber Higher Secondary School (Teppakulam), Government Higher Secondary School, Thiruvallarsolai, Holy Cross Higher Secondary School, St. Mary's Tope Middle School, Syed Murtaza School, S.B.I.O.A School, St. Joseph's Anglo Indian Girls Higher Secondary School, St. Anne's Girls Higher Secondary School, and the students of Holy Cross College, Trichy visited the exhibition and immensely benefitted. A fascinating chemistry experiment area at Chem Expo was also available, featuring fun chemistry experiments like Volcanic eruption, Elephant toothpaste, Dancing dolls, Invisible inks, and blood without cuts. For the purpose of raising awareness about sustainable environments, science fiction films were shown to school children. This exhibition will serve

as an excellent platform to emphasize the significance of moving toward a sustainable environment both for the presenters and visitors.

On 29th August, the Lavoisier Chem Association of the PG & Research Department of Chemistry, organized an **“INVITED LECTURE CUM INTERACTION WITH INTERNATIONAL SCIENTIST”**. **Dr. ARUN T. JOHN PETER** was the chief guest. The meeting commenced with a prayer followed by the welcome address by Ms. Harshene B (II BSc Chemistry A sec), and the minutes of the previous meeting was read by Ms. Gobikaa R, (III BSc Chemistry A sec) the joint Secretary of the Lavoisier Chem Association. **Dr. Arun T. John Peter** discussed his personal experiences on research and the opportunities which are available all over the world. He explained the scope of the research and the stipends available to carry over the research. He then addressed several opportunities in India as well as how to apply for fellowships for Master's, Ph.D., and post-doctoral programs. The session was very effective and had a significant impact. All the UG and PG were attended and benefitted from this session. The session concluded with a formal vote of thanks delivered by Ms. Jone of Ark (II B.Sc. Chemistry).

An industrial visit was organized by the PG and Research Department of Chemistry to Vaseegra vedha -a pure herbal factory located at Thanjavur on 21st August 2024. The factory specializes in the production of various herbal supplements, teas and essential oils. It employs a blend of traditional methods and modern technology to ensure high-quality output. The factory is known for sourcing organic herbs and practicing environmentally friendly manufacturing processes. They use the hydrosols method for the extraction of the plant products. The visit to the herbal factory provided valuable insights into the intricate processes behind herbal product manufacturing. In the herbal factory, they cultivated the plants on their farm and maintained the entire process naturally and effectively. 18 faculty members visited and benefitted from the visit by knowing the various methods of preparing the essential oils and supplements.

The PG and Research Department of Chemistry, Holy Cross College organised a program on the topic **“Pathways to Success-Career Guidance in Railway Sector”** on 23rd September 2024. The program started with a formal prayer and welcome address delivered by Ushalakshmi R of III B.Sc. Chemistry B sec. The Resource person was **Mr. M.R. JEGAN** working as a Chemical and Metallurgical Superintendent, Southern Railway Ponmalai, Trichy. He spoke on career opportunities for chemistry students in various central government sectors after

completing their undergraduate and post graduate degree. The resource person shared their knowledge on interview skills and entrance exam questions perspectives with his own life experiences, students actively participate in the feedback session and promised to utilise the opportunities in central government sectors along with they are equipped with various schemes available for women students in government sectors. Nearly 210 students of I & III UG and I & II PG participated and benefitted by this motivating session. The meeting ended with the formal vote of thanks by Reettamary J of III B.Sc. Chemistry B sec.

The PG and Research Department of Chemistry, Holy Cross College (Autonomous) Trichy, organized the two-day international conference on the theme, **“Frontiers in Material Research: Innovations and Challenges towards a Greener Future”** (FMRICGF-2024) in collaboration with the Department of Materials Science, School of Technology, Central University of Tamilnadu, Thiruvavur on 26 and 27 November 2024. The objective of the conference is to provide a platform for researchers, chemists and academicians from all over the world to present their research findings and development activities in their field of research which would facilitate the exchange of new ideas, applications and experiences leading to collaboration among global partners. This conference would definitely offer suitable solutions to the global environmental issues. The event commenced with the inaugural function. **Dr. Leema Rose. A**, Conference convener, Associate Professor and Head, Department of Chemistry, Holy Cross College (Autonomous), Trichy, welcomed the gathering. **Prof. S. Meenakshi**, Director R&D, The Gandhigram Rural University, Gandhigram, delivered the inaugural address. The highlights of the conference were briefed by **Dr. K. Sethuraman**, Professor and Dean, Department of Materials Science, School of Technology, Central University of Tamilnadu, Thiruvavur. **Prof. S. Meenakshi**, Director R&D, The Gandhigram Rural University, Gandhigram, released the first copy of the souvenir and **Rev. Sr. (Dr.) Rajakumari. P**, Principal, Holy Cross College (Autonomous), Trichy received the first copy of the souvenir.

Rev. Sr. Dr. Sarguna, Secretary, **Rev. Sr. Dr. Rajakumari. P**, Principal, Holy Cross College, (Autonomous), Trichy and **Dr. S. Beer Mohamed**, Associate Professor and Head, Department of Materials Science, School of Technology, Central University of Tamilnadu, Thiruvavur offered felicitations. **Dr. Cathrine. L**, Assistant Professor of Chemistry, proposed the vote of thanks. The inauguration was followed by five technical sessions. **Dr. N. Rajamanickam**, Marie S. Curie Fellow, ICIQ Institute of Chemical Research of Catalonia, Tarragona, Spain

delivered a talk on the topic *“Halide Perovskites: Pioneering Advances in Photovoltaics and Spintronics”*. **Prof. Xiao Feng**, School of Chemistry, Dalian University of Technology, Liaoning, China presented a lecture on the topic *“Precision Control of Defects in Metal-Organic frameworks”*. A lecture on *“Chasing Charge Localization in Semiconductors with Ab Initio methods: Insights on Photovoltaics and Photocatalysis”* was given by **Prof. Francesco Ambrosio**, Professor, University of Basilicata, Italy. **Dr. Srinivasan Sampath**, Assistant Professor, Department of Materials Science, School of Technology, Central University of Tamilnadu, Thiruvavur presented a talk on the topic *“Smart Materials for Energy Applications”*. **Prof. R. Ramesh Babu**, Professor and Head, Department of Physics, Bharathidasan University, Trichy spoke on the topic *“Advances in Organic Solar Cell Fabrication using Low-Bandgap Polymers”*. The second day comprised of four technical sessions. **Dr. Megarajan**, FONDECYT- Postdoctoral Fellow, Department of Physico-Chemistry, Faculty of Chemical Sciences, University of Concepcion, Edmundo Larenas, Casila, Chile presented a lecture on the topic *Enhanced nitroarenes reduction and “Cat in a bag” recycling abilities of platinum nanoparticles stabilized with Dendrimer-PEG polymer*. A talk on the topic *“Strategic Design of π -conjugated Organic Molecules Manipulating Structure and Properties”* was given by **Dr. Sasanka Dalapati**, Assistant Professor, Department of Materials Science, School of Technology, Central University of Tamilnadu, Thiruvavur. **Prof. Thangathurai**, Professor, Centre for Nanoscience and Technology, Puducherry spoke on the topic *“Electron Microscopy for Materials Research – A Quick Review”*. **Prof. Ewa Kowalska**, Professor, Faculty of Chemistry, Jagiellonian University, Gronostajowa, Poland delivered a lecture on the topic *“Heterogenous Photocatalysis for Environmental Purification”*. The valedictory address was delivered by **Prof. Thangathurai**, Professor, Centre for Nanoscience and Technology, Puducherry. Formerly, **Dr. A. Tony Elizabeth**, organizing Secretary and Assistant Professor of Chemistry, welcomed the gathering. The report of the conference was presented by **Dr. J. Felicita Florence**, Organizing Secretary and Assistant professor of Chemistry. Feedback time will be allotted for students and vote of thanks was proposed by, **Dr. P. Christina Ruby Stella**, Organizing Secretary and Assistant professor of Chemistry. The conference was appreciated as a timely and valuable event by the resource people. Students, research scholars and faculty from reputed institutions like ICIQ Institute of Chemical Research of Catalonia, Spain, Dalian University of Technology, China, University of Basilicata, Italy, University of Concepción, Chile, Jagiellonian University, Poland, Pondicherry Central University, Central University of Tamil Nadu, Bharathidasan University, National Taipei University of Technology, Taiwan,

Cochin University of Science And Technology, Kerala, Bangalore University, National Institute of Technology, Trichy, DG Vaishnav College, Chennai, Shivaji Art's, Comm. & Science College, Kannad, Annai Scholastica Arts and Science College For Women, Pamban, Hindustan Institute of Technology, Chennai, St. Xavier's College (Autonomous), Palayamkottai, Nirmala College For Women, Coimbatore, Karpagam Academy of Higher Education, Coimbatore, Annapoorna college of Engineering, Salem, Thanthai Periyar Government Arts and Science College (Autonomous), St. Joseph's College (Autonomous), Dhanalakshmi Srinivasan College of Arts and Science for Women (Autonomous), Permabalur, Mother Gnanamma Women's College, Jeyakondam, Adhi College Of Engineering and Technology, Chennai, Bharathidasan University, Tiruchirappalli, Jamal Mohammad College, Trichy, Cauvery College For Women, Trichy and from many more colleges participated in the international conference. 76 participants registered for the conference from all over the globe. 56 papers were presented both in virtual and offline modes. In every session of the conference, excellent research findings and advancements in the current fields of research were discussed, enriching the participants with new ideas for research and helped them to gain insights on both inward research in core areas of chemical and physical sciences and outward research- multi-disciplinary and inter-disciplinary fields. On the whole, the two-day conference rendered a good outlook into the current global researches in various recent current fields of research like biomaterials, computational materials, industrial materials, sustainable materials, simulation, modulation and control of smart materials. The views expressed and explored on this platform by the resource persons and paper presenters made the participants to rethink ideas which we cling on to unthinkingly in our day to day life.

Lavoisier Chem Association and Chem Research Forum of PG and Research Department of Chemistry jointly organized an International Scientist Meet on 27th January 2025. **Dr. RAMESH PANDIAN, Senior Researcher/ Lecturer, School of Molecular and Cell biology, University of Witwatersrand, Johannesburg, South Africa** and **Dr. BERLINA MARIA MAHIMAI, Post-Doctoral Researcher National & Local Joint Engineering, Researcher Center for Applied Technology of Hybrid Nanomaterials, Henan University, Kaifeng, China** were the Resource Persons. The meeting commenced with a prayer followed by the welcome address by Dr. L. Cathrine, Assistant Professor of Chemistry. Dr. Ramesh Pandian spoke on the topic “**Structural and Functional Studies of HIV-1 wild type and mutant proteases using a dual inhibition study**” and he emphasized

that this study can help identify mechanisms of drug resistance and design new inhibitors. He also shared that the development of multiple therapeutic agents targeting various steps of the HIV life cycle helped transform HIV infection from an inevitably fatal disease into a manageable chronic ailment and this has resulted in dramatic improvement in HIV-related morbidity and mortality, particularly in developed countries where patients have access to potent anti-retroviral drug combinations that allow sustained control of viral replication and combat drug-resistant virus. In the second session, **Dr. BERLINA MARIA MAHIMAI** delivered a lecture on the topic “**Highly-stable Polyaniline Composite Enhanced by Conductive Molybdenum dioxide Nanosheets for Supercapacitors**”. She explained that the good electrical conductivity and pseudocapacitive characteristics of Polyaniline and its potential as a conductive bridge to enhance electrochemical performance when integrated with other metal-based compounds. The sessions were very effective and had a significant impact. The III UG, I PG, II PG and research scholars attended and about 200 students were benefitted from this session. The session concluded with a formal vote of thanks delivered by Dr. V. Priya, Assistant Professor of Chemistry.

On 13th February 2025, the PG and Research Department of Chemistry, organized a workshop on the topic “**EXPLORING PHYTOCHEMISTRY: A HANDS-ON WORKSHOP**”. **Dr. R. Kanmani** and **Dr. F. Janeeta Priya** Assistant Professor of Chemistry, Holy Cross College were the resource persons. The meeting commenced with a prayer followed by the welcome address by Udayamathi of II B.Sc Chemistry B sec. The workshop aimed to provide the students with an understanding of plant-derived chemical compounds, their properties, extraction techniques, and applications in various industries such as pharmaceuticals, cosmetics, and food. The session started with the introductory aspects of phytochemistry, primary metabolites and secondary metabolites. Mam spoke on the various extraction techniques of plant extract and showed the Soxhlet, Maceration techniques. She also explained the identification of phytochemicals using chemical tests and chromatography. The workshop was very effective and had a significant impact. About 80 students of II UG actively participated and benefited from this workshop. The workshop was concluded with a formal vote of thanks.

The Lavoisier Chem Association of the PG & Research Department of Chemistry organized a workshop on 17th February on the topic “Big Idea- An Ideation”. **Dr. D. SUGUMAR**, Principal, Care College of Arts and Science, Tiruchirappalli, and **Dr. B. ABDUL SUBAN**, Associate Professor, Care Business School, Tiruchirappalli, were the resource persons. The workshop commenced with a prayer and the welcome address was delivered by Ms. R.Gobikaa (III BSc Chemistry ‘A’), and the minutes of the previous meeting were read by Ms. P.Abarna (II MSc Chemistry), the Joint Secretary of the Lavoisier Chem Association. The first session was conducted by Dr. B. Abdul Suban. Sir spoke about “Creating the Power House of Innovation.” Sir insisted on the students analyzing and concentrating their skills, and also that a basic idea is necessary and enough to become an entrepreneur. This session was very effective and more valuable to the students. The next session was taken by Dr. D. Sugumar. Sir spoke about “what you need to start a business?” Sir motivated the students to become entrepreneurs, and he gave some real-life examples of a few entrepreneurs. Sir conducted an activity based on the topic “How to change daily life problems into ideas and convert that into a business.” Students enthusiastically participated and enhanced their ideas. This session was more beneficial to the students. The workshop had a significant impact. Around 90 students from I UG attended and benefitted from this session. The session concluded with a formal vote of thanks.

The PG and Research Department of Chemistry, Lavoisier Chem Association, Holy Cross College conducted a valediction ceremony for the association activities on 18th February 2025. Ms.S.Rama, Criminal and Cybercrime Advocate, Tiruchirappalli. was the chief guest. The meeting was held at LG hall at 2.30 pm. The meeting commenced with a prayer followed by a welcome address delivered by Ms. P. Abarna (II MSc Chemistry) Association Joint secretary. Ms. Samantha (II B.Sc. Chemistry B), Assistant Secretary of the Chemistry Association read the minutes of previous meetings and the report of the Curie Chemistry Forum, Chemistry Research Forum, Element Explorers and Chem Chrome Crafters Club were read by the respective club representatives. The Resource person spoke on the topic ‘Women’s guide to Legal Protection & Self-advocacy which is an essential topic to be discussed. The resource person emphasized the young women today have a wide range of rights and resources designed to protect and empower them. Understanding these rights and the tools available to advocate for oneself is essential for building confidence, safety, and autonomy She shared many life experiences as an example to students. She spoke about the importance of women’s laws and the ways to protect ourselves. The Prize distribution session was started and the prizes were distributed for the representatives of different clubs, in Chem Expo and prize winners of curie

forum and active participants. Nearly 330 students of the chemistry department actively participated and got benefitted from this useful session, which ended with a formal vote of thanks delivered by Ms. R.Gobikaa (III BSc Chemistry 'A'), Secretary of Chemistry Association.

CHEM RESEARCH FORUM ACTIVITIES (2024-2025)

On 22 July, the Chem research forum of the PG & Research Department of Chemistry, organized a workshop on the topic "ICT TOOLS IN RESEARCH". Dr. Vimal Jerald, Assistant Professor, Department of Computer Science, St. Joseph's college, Trichy was the resource person. The meeting commenced with a prayer followed by the welcome address by Ms. P. Jevitha of 1st M. Sc Chemistry and the minutes of the previous meeting was read by Ms. S. Yuvasri of 2nd M.Sc. Chemistry. The resource person enlightened us with his insightful presentation. He gave a brief explanation about ICT tools in research and explained the various ICT tools such as AR loopa, Photo meth, Chat GPT, Scispace, Gamma, etc. He gave an idea about the importance of ICT tools and how to publish review articles in a short period of time. Students learnt the applications of ICT tools. The workshop was very effective and had a significant impact. About 50 students of I PG, II PG and research scholars actively participated and benefited from this workshop. The workshop was concluded with a formal vote of thanks delivered by Ms. T. R. Amsica (Research scholar).

On 27th August, the chem research forum of the PG& Research department of Chemistry organized lecture on the topic "Research Process and Crafting of Literature". Dr.J.Rosaline Vimala , Assistant Professor of chemistry, Holy Cross College, Trichy, was the resource person. The meeting commenced with a prayer followed by the welcome address by Ms.P.Jeevitha of I-M.Sc. Chemistry, and the minutes of the previous meeting was read by Ms.S.Yuvasri of II-M.Sc. Chemistry. The resource person enlightened us with her insightful

presentation. It included the following key points: steps involved in research, Crafting of Literature, Literature Sources, Referred vs Non-Referred Materials Sources of Research Papers/Articles, Research Publication Types, The Importance of proper citation and referencing in academic writing, with a discussion on various styles. Students learnt about all these and got ideas about proceeding with their research work. The lecture was very effective and had a significant impact. The II PG & Research scholars actively participated and benefited from this lecture. The meeting concluded with a formal vote of thanks delivered by Ms. Bavithra of III-B.Sc. Chemistry.

On 10th September, the chem research forum of the PG and research department of chemistry organized a lecture on the topic "Fellowship and career opportunities in government sector". P. Silambarasan young professional, model career center - Trichy, under the project of the Ministry of labour and employment Government of India was the resource person. The meeting commenced with a prayer followed by the welcome address by P. Aparna of II.M.Sc. Chemistry and the minutes of previous meeting was read by Ms. S. Yuvasri of II MSc. Chemistry. The resource person had enlightened us with his insightful presentation. He gave a brief explanation about various fellowship and career opportunities in government sectors. He gave an idea about internship opportunities, fellowship opportunities, private job opportunities, government job opportunities, opportunities in International NGOs, startup opportunities and opportunities in central government research institutes. The lecture was very effective and had a significant impact. The UG, PG and research scholars were actively participated and benefited from this lecture. The meeting concluded with a formal vote of thanks delivered by Research Scholar Ms. Virginia

On 7th December, the Chem research forum of the PG and research department of Chemistry organized a lecture on the topic "Grant Proposal Mystery: Insights and success stories to secure funding across agencies". Dr. H. P. Nagaswarupa Professor and Chairman, Department of studies in Chemistry, Davangere University was the resource person. The meeting commenced with a prayer followed by the welcome address by Ms. T. R. Amsica Research scholar and the minutes of previous meeting was read by Ms. S. Yuvasri of II M.Sc. Chemistry. The resource person had enlightened us with his insightful presentation. He gave a brief explanation about various funding agencies and all his successful case studies which has an inspirational impact. He gave many ideas about how to write a proposal for the funding agencies. The lecture was

very effective and had a significant impact. The PG, research scholar and faculty members actively participated and benefited from this lecture. The meeting concluded with a formal vote of thanks delivered by Ms.Sanjusri.

The Holy Cross Innovation & Incubation Council, in collaboration with the Chem Research Forum of the PG & Research Department of Chemistry, organized a session on "**Intellectual Property Rights**" on February 12. The resource person for the session was Dr. Mary Mangaiyarkarasi, Patent Officer at SRM Group of Institutions, Tiruchirappalli. The event commenced with a prayer, followed by a welcome address delivered by Dr. L. Cathrine, Assistant Professor of Chemistry. Ms. S. Yuvasri, II M.Sc. Chemistry student and Secretary of the Chem Research Forum, then presented the minutes of the previous meeting. Dr. Mary Mangaiyarkarasi engaged the audience with an insightful presentation on Intellectual Property Rights (IPR). She provided a clear overview of IPR, explaining key concepts such as patents and copyrights. She elaborated on how property rights grant exclusive usage to the holder for a specific period and emphasized that IPR ensures complete control over a new innovation and its creator. Additionally, she highlighted how even minor innovations can have a significant societal impact, encouraging participants to innovate and patent ideas for their benefit. The workshop proved to be highly informative and impactful, benefiting I PG, II PG, and research scholars, along with the faculty of the Department of Chemistry. The session concluded with a formal vote of thanks delivered by Ms. S. Nithyasri, III B.Sc. Chemistry (HCIICT representative).

CURIE CHEMISTRY FORUM ACTIVITIES (2024-2025)

Every year June 26 is globally observed as International Day against Drug Abuse to create awareness about issues related to drugs and to strengthen action and cooperation in achieving a world free of drug abuse. The PG and Research Department of Chemistry as directed by the management of the college, aimed to spread awareness among the students about the dangers involved in drug abuse. The main objectives of this event are to empower students to make informed decisions related to use of alcohol and other drugs and to encourage the campus community to prevent alcohol and drug-related incidents. To inform about the harmful effects of drugs, bulletin boards of the respective department were loaded with information's related to it. An Anti-drug fingerprint campaign was done to highlight the seriousness of the situation and to create awareness among the people, especially the youth.

The PG and Research Department of Chemistry, Curie Chemistry Forum, Holy Cross College, organized an Intra-departmental paper presentation competition on 'Preserving the Planet for Future Generations' in commemoration of World Nature Conservation Day on 31 July, 2024. Ms. S. Abinaya (II. M.Sc. Chemistry) welcomed the gathering. Ms. Jothika (I. M.Sc. Chemistry) read the minutes of the previous meeting. Every year on July 28th, people around the globe come together to observe World Nature Conservation Day. This day serves as a reminder of the importance of conserving our natural resources and protecting the environment for future generations. The purpose of this competition is to spotlight the importance of natural resources for sustainable environment. The students presented papers on the topic 'Preserving the Planet for Future Generations Energy conservation'. Totally 16 papers were presented and Dr. A. Leema Rose, Associate Professor of Chemistry & Head was the judge. She appreciated the efforts taken by the students. Nearly 44 students of I and II PG chemistry got greatly benefited from this useful session. The session ended with a formal vote of thanks delivered by Ms. S. C. Gayathri of II B.Sc. Chemistry.

On 28th August 2024, Curie Chemistry Forum, Holy Cross College, organized an Intra-Departmental Quiz competition on 'Lavoisier discoveries and the Periodic Table' in commemoration of Birth Anniversary of Antoine Lavoisier – Father of Chemistry. Ms. V. Madhumitha (I. M.Sc. Chemistry) welcomed the gathering. Ms. S. Abinaya (II. M.Sc. Chemistry) read the minutes of the previous meeting. Celebrating Antoine Lavoisier's birthday is a wonderful opportunity to honour his ground breaking contributions to chemistry and promote scientific learning. Educational celebration of Antoine Lavoisier's birthday that honours his legacy and inspires future generations of scientists. The students participated in quiz competition on the topic 'Lavoisier discoveries and the Periodic Table'. Totally 8 teams participated and Dr. M. Stella Bharathy & Dr. M. Kavitha, Assistant Professors of Chemistry were the quiz masters. They appreciated the efforts taken by the students. 45 student participants greatly benefited from this useful session, which ended with a formal vote of thanks delivered by Ms. M. Ragavi (I B.Sc. Chemistry-B)

On 18th September 2024, Curie Chemistry Forum, Holy Cross College, organized an Inter-Departmental drawing competition on 'Ozone for life' in commemoration of world ozone day. Ms. S. Abinaya (II. M.Sc. Chemistry) welcomed the gathering. Ms. Jennie Joseline (III. B.Sc. Chemistry-A) read the minutes of the previous meeting. World Ozone Day is observed on

September 16 every year to spread awareness about the importance of ozone. The ozone layer acts as an invisible shield and protects us from harmful ultraviolet (UV) radiation from the sun. In particular, the ozone layer protects us from the UV radiation, known as UV-B, which causes sunburn. Long-term exposure to high levels of UV-B threatens human health and damages most animals, plants and microbes, so the ozone layer protects all life on Earth. To raise awareness about the importance of preserving the ozone layer, drawing competition for the students were arranged. 46 students from various departments of Holy Cross College actively participated and showcased their skills. The session ended with a formal vote of thanks delivered by Ms. S.C. Gayathri (II B.Sc. Chemistry-A)

On 23rd September 2024, Curie Chemistry Forum, Holy Cross College, organized hands on workshop on Dyeing of fabrics. Ms. Aline Ruth (II. B.Sc. Chemistry-A) welcomed the gathering. Ms. Jeny Sharon (II. B.Sc. Chemistry-A) read the minutes of the previous meeting. The main objective of this workshop is to educate students about Tie and Dye and Batik printing methods, fostering entrepreneurial spirit. Mrs. Ravi demonstrated simple, fascinating steps involved in Tie and Dye and Batik printing. Students were provided white cloth to practice Tie and Dye and Batik printing under Mrs. Dharshini Ravi's guidance. This interactive session sparked excitement and creativity. Nearly 85 students from II UG actively participated and got greatly benefited from this session. The session ended with a formal vote of thanks delivered by Ms. Pirathiksha (II B.Sc. Chemistry-B)

On 13th November 2024, Curie Chemistry Forum, Holy Cross College, organized an online workshop on 'E-content preparation by the students'. Ms. V. Madhumitha (I. M.Sc. Chemistry) welcomed the gathering. Ms. S. Abinaya (II. M.Sc. Chemistry) read the minutes of the previous meeting. This workshop has been organized in order to prepare the students for the future. In an increasingly digital world, technological literacy is essential. By engaging with e-content, students not only gain knowledge in their respective fields but also develop valuable digital skills. These skills are crucial for future careers, as technology plays an integral role in almost every industry. E-content equips students with the ability to navigate digital platforms, use learning management systems, and communicate effectively online. 16 students from UG and PG were given training on E-content development using free online recording platform and PowerPoint recording platform and the students were asked to prepare the e-content on their

own from any topic in chemistry. The student's response for this workshop was highly commendable. The session ended with a formal vote of thanks delivered by Ms. Nateesha (III B.Sc. Chemistry-B)

The PG and Research Department of Chemistry, Curie Chemistry Forum, Holy Cross College, organized an Intra-departmental essay writing competition on 'Constitution and citizen's duties' in commemoration of National Constitution Day on 25th November, 2024. Ms. S. Abinaya (II. M.Sc. Chemistry) welcomed the gathering. Ms. Jothika (I. M.Sc. Chemistry) read the minutes of the previous meeting. National Constitution Day is celebrated annually to honour the adoption of the Constitution of India on November 26 and to raise awareness about its significance. On this day, discussions and educational programs are organized to remind people of their duties toward the nation and society. To raise awareness on citizens' rights, such as the right to equality, freedom of speech, and the right to education an essay competition was conducted. 12 students participated and wrote the essays enthusiastically. The top three essays were awarded certificates.

On 5th December 2024, Curie Chemistry Forum, Holy Cross College, organized an Intra-Departmental Debate competition on the topic 'Women in Science' in commemoration of Marie Curie's Birthday. Ms. J. Jenni Joselin (III. B.Sc. Chemistry-A) welcomed the gathering. Ms. R. Natheesha (III. B.Sc. Chemistry-B) read the minutes of the previous meeting. The debate competition centered around the topic "Women in Science", aiming to explore the challenges, achievements, and future opportunities for women in the STEM (Science, Technology, Engineering, and Mathematics) fields. Participants presented their perspectives on the importance of gender equality in scientific disciplines. 15 students of both UG & PG chemistry participated and greatly benefited from this useful session. The top three debaters were awarded with certificates. The session ended with a formal vote of thanks delivered by Ms. G. Harini I B.Sc. Chemistry-A.

On 25th January 2025, Curie Chemistry Forum, Holy Cross College, organized a training session on "The Art of Writing Professional Profiles". Ms. Aline Ruth (II. B.Sc. Chemistry-A) welcomed the gathering. Ms. Jeny Sharon (II. B.Sc. Chemistry-A) read the minutes of the previous meeting. A professional profile can be transformed into a powerful tool for career advancement. It provides a concise summary of a person's skills, experience, achievements, and career goals. When written well, it communicates the individual's strengths and how they can contribute to a team. The main objective of this training is to make the final year students

to prepare their profile. The students were instructed to highlight the key challenges, successes and achievements along with their educational qualification in their profiles. The training session was very interactive and the students raised many queries related to profile writing. All the queries were answered by the resource person. 115 students from final year UG and PG benefitted from this useful session. The session ended with a formal vote of thanks delivered by Ms. R. Natheehsa, III B.Sc. Chemistry-B.

The PG and Research Department of Chemistry, Curie Chemistry Forum, Holy Cross College, organized an Inter-departmental poster making competition on ‘Science for Sustainable Future’ in commemoration of National Science Day on 14th February, 2025. Ms. Nateesha (III. B.Sc. Chemistry-A) welcomed the gathering. Ms. Jothika (I. M.Sc. Chemistry) read the minutes of the previous meeting. National Science Day is celebrated in India on February 28 each year to mark the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928. The main purpose of celebrating Science Day is to understand the role of science and technology in society. Keeping this in view, Curie forum organized the poster making competition to emphasise the importance of science for sustainable future. 16 students from various departments participated and displayed their posters. The response of the students is very positive. The top three posters were awarded certificates. The session ended with a formal vote of thanks delivered by Ms. Jennie Joselin, III B.Sc. Chemistry-A.

Element Explorers: A Wellness Club (2024-2025)

The PG & Research Department of Chemistry inaugurated the “**Element Explorers**” a wellness club of chemistry department on 29th August 2024. The inaugural ceremony began with a prayer followed by the welcome address by Ms. Harshene B (II BSc Chemistry A sec). The Element Explorers Club members were elected and honored with Bouquet. The chief guests were Dr. Arun T. John Peter, Principal Investigator, Life Sciences Institute, University of British Columbia, Canada. The chief guest Dr. Arun T. John Peter spoke on the value of art in shaping well-rounded individuals and fostering a vibrant community. 295 students participated. The ceremonial function ended with a formal vote of thanks delivered by Ms. Jone of Ark (II B.Sc. Chemistry A Sec).

The Wellness Club of PG and Research Department of Chemistry, Holy Cross College (Autonomous) in Collaboration with Rotary Club of Tiruchirappalli Diamond city, Rotary Club of Tiruchirappalli Butterflies and Rotary Club of Tiruchy Stars organized an awareness session

on cervical cancer on 7th February 2025. The event was conducted to commemorate **World Cancer Day (February 4th)** and aimed at educating students and the community about the causes, prevention, and early detection of cervical cancer. The program started with the Prayer service followed by the welcome address delivered by Dr. Priya Assistant Professor, Holy Cross College. Dr. S. Chitra , Founder and Director, Janani Trichy Fertility Centre and Lalitha Nursing Home, Tiruchirappalli was the resource person. Dr. Chitra delivered a comprehensive talk covering various aspects of cervical cancer, including risk factors such as HPV infection, the significance of regular Pap smear tests, the role of the HPV vaccine and treatment options and emotional support for patients. The awareness session proved to be both enlightening and empowering for the participants. It successfully conveyed the message that cervical cancer is preventable and treatable when detected early. The event fostered a sense of responsibility among the students to spread awareness within their families and communities. The session ended with the vote of thanks. 250 students benefitted from the session.

On 10th February 2025, the Element Explorers-Wellness Club & Alumnae Association of the PG and Research Department of Chemistry, organized a wellness session on the topic “How to Control the Uncontrollable Things”. Mr. Ramakrishnan Vijaykumaran, Solution Architect, Aveva, Founder of Win Your Morning Organization and Mrs. Mohanapriya Pakkirisamy Alumna (2003-2006 Batch), Application Analyst, Quest Academy of Learning, Brisbane, Australia were the resource persons. The meeting commenced with a prayer followed by the welcome address by Dr. Amala Infant Joice, Assistant Professor of Chemistry, Holy Cross College, Trichy. The resource person enlightened us with his insightful presentation. He gave a brief explanation about his organization “Win your Morning” and explained the Maslow’s Hierchy of needs, Circle of control, influence and concern. He gave an idea about the things which are under control and the things which are not under control. Students learnt the method to control things, about the nervous system functions, how to change the brain and the Box Breathing technique in detail. The session was very effective and had a significant impact. About 50 students of I PG, II PG, research scholars and staff actively participated and benefitted from this session. The workshop was concluded with a formal vote of thanks delivered by Dr. A. Agila, Assistant Professor of Chemistry, Holy Cross College, Trichy.

On 17th February 2025, Wellness Club, PG and Research Department of Chemistry, Holy Cross College (Autonomous), Organized a session on Yoga and Meditation program. The program started with the prayer service followed by the welcome address delivered by Ms. Z.

Asin Maria Mirza (III B.Sc. Chemistry A) and the yoga session was carried out by the resource person Yoga Sree N. Ramasamy, Director of Mahatma Yoga Centre, Alampattiputhur, Trichy. Nearly 100 students benefited by learning the Suryanamaskaram, padhmasanam, pranayamam and so on. The main objective of the program is to make the students lead the healthy life without stress and disease. The students and staff were led through a series of basic asanas (yoga postures) for flexibility and strength, breathing exercises (pranayama) for improved oxygen flow and concentration and guided meditation to develop mindfulness and emotional stability. His session was both informative and practical, with many participants expressing a sense of calm and rejuvenation by the end. The positive feedback from participants highlighted the effectiveness and relevance of incorporating such wellness initiatives in the educational environment. The session ended with the formal Vote of thanks delivered by K. Sandhiya (III B.Sc Chemistry B).

Chem-Chrome Crafters Club (2024-2025)

The PG & Research Department of Chemistry inaugurated the **Chem-Chrome Crafters Club** on 29th August 2024. The inaugural ceremony began with a prayer followed by the welcome address by Ms. Harshene B (II BSc Chemistry A sec). The Chem-Chrome Crafters Club members were elected and honored with bouquets. The chief guest was Dr. Arun T. John Peter, Principal Investigator, Life Sciences Institute, University of British Columbia, Canada. The chief guest Dr. Arun T. John Peter spoke on the value of art in shaping well-rounded individuals and fostering a vibrant community. 295 students participated. The ceremonial function ended with a formal vote of thanks delivered by Ms. Jone of Ark (II B.Sc. Chemistry A Sec).

The **Chem-Chrome Crafters Club** celebrated Teacher's day on 5th September 2024. The celebration began with a prayer followed by the welcome address by Ms. Reshma Arockiasamy, Student Council member (III BSc Chemistry B sec). The students entertained the staff members with dance performance. The celebration ended with a formal vote of thanks delivered by Ms. Asin Maria Mirza, president, Chem-Chrome Crafters Club (II B.Sc. Chemistry A Sec).

The **Chem-Chrome Crafters Club** celebrated Pongal festival with great enthusiasm on 13th January 2025 at the college ground. The event began with a traditional Pongal preparation

ceremony, symbolizing prosperity and gratitude towards nature. Participants dressed in attire, adding to the festival spirit. The celebrations included cultural performance such as folk dances and traditional songs. A highlight of the event was the preparation of sweet Pongal which was shared among students. The event conducted with joyful celebrations, fostering unity and appreciation for Tamil culture. It was a memorable occasion for all present.

In commemoration of the Women's Day, the Club organized an Inter-Collegiate Competition on 18th February 2025 based on the theme "Accelerating Gender Equality: The Path to Equal Rights for all". The various events conducted were Poetry Writing, Essay Writing, Rangoli, Painting, Ethnic wear and short film. Nearly eight colleges from in and around Trichy registered and participated in the inter-collegiate competition. About 50 students actively participated in different events. The overall winner's trophy was bagged by Cauvery College, Trichy and Government Arts and Science College, Thiruverumbur, Trichy, bagged the runner's up trophy.