



St. Xavier's College (Autonomous)

(Recognized as "College with Potential for Excellence" by UGC & Accredited at A⁺⁺ grade with CGPA of 3.66/4 in IV Cycle by NAAC)

Palayamkottai – 627 002

ANNUAL REPORT 2023-2024

DEPARTMENT OF CHEMISTRY (Shift – I & II)

The inauguration of Chemistry Association activities for the academic year 2023-2024 was held on 12.07.2023. Dr. Y. Jaya Vinse Ruban, Head of the Department, presented the association activities planned for this academic year 2023-24.

Rev. Fr. Dr. S. Mariadoss S.J., Principal officially inaugurated and delivered the Presidential address. The invited resource person Dr.G. Gnana Kumar, Head, Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai gave a talk on "Fuel Cell Electrode Material Modification for Clean Energy Production".

Activities

- The Department of Chemistry organized an awareness programme on "Group Service Examinations" on 21.07.2023. Our notable alumni Mr. S. P. Chelliah and Director of Pathways Academy, Tirunelveli gave a wonderful, motivational speech on 'How to Crack Civil Services, TNPSC, SSC and other examinations. He has also emphasized on the preparation for the examination, question pattern, necessary source books for the preparation and encouraged the students to appear for these examinations.
- An exclusive women Programme was organized on 09.08.2023. The theme of the event was "An Exposure to Women's Health". Chief guest was Dr. Sumu Priya Saravana Raja, Consultant, Vamsam Fertility and Bairav Medical Centre. She emphasized on women's issues, health and hygiene, food and nutrition.

- State level Cubane Science and Chemistry quiz at college level was organized on 31.08.2023. 11 teams in general science and 12 teams in chemistry quiz participated at the college level.
- State level Cubane Science and Chemistry Quiz at School level was organized on 1.09.2023. 42 school teams in General Science and 38 teams in Chemistry Quiz participated at the school level.



- An International Conference on “Recent Advances in Chemical Sciences” (ICRACS-24) was conducted on 26.09.2023.
- Dr. K. Kalayasundaram, Senior Scientist Laboratory for Photonics and Interfaces (LPI) Swiss Federal Institute of Technology at Lausanne, Lausanne, Switzerland gave talk on “Solar Energy Harvesting using Thin Film Solar Cells”.
- Dr. R. Renganathan, Retired Professor, UGC-Emeritus Fellow, Bharathidasan University, Trichirappalli, spoke about “Photocatalysis-Concepts and Preliminary Investigations Relevant to Energy and Environment”.
- Dr. C. Gunanathan, Professor, School of Chemical Sciences, National Institute of Science Education and Research (NISER), Bhubaneswar, India discussed “Sustainable Catalytic Transformations in Organic Synthesis”.

- Dr. J. Brijitta, Marie Curie Fellow, Julich Centre for Neutron Science, Heinz Maier Leibnitz Zentrum, Lichtenbergstr, Germany conversed about “Field Induced Ordering in Microgel Dispersions”.
- Dr. S. Jenn Anand, Process Engineering Manager, Department of Plasma Dry Etching, Intel Corporation, Chandler, Arizona, USA explained about “Magnetic Nanomaterials, Radiation Effects and their Applications in Nuclear Energy”.
- Dr. T. S. T. Balamurugan, MSCA ERA Fellow, Faculty of Chemistry, University of Lodz, Poland gave exposure on “Emerging Electro analytical Platforms for Sensing Applications”.
- Poster and Oral Presentations were conducted in which 120 students participated. Best oral and poster presentations were awarded with prizes.
- An alumni meet was conducted on 07.10.2023 in which 24 old students attended the event.

An Industry Academia interaction meet was held on 24.01.2024. Mr. M. Anantharaj, Researcher, Osaka Gas Chemicals, Osaka, Japan, Dr. Sunil Kumar, Software Engineer-BIOVIA, Dassault System Solutions Lab Pvt Ltd, Bengaluru, Dr. S. Antony Savarimuthu, Senior Research Scientist, Syngene, Biocon Company, Bengaluru, Mr. M. VIGNESHWAR, Senior Scientific Assistant, Oil and Natural Gas Corporation Ltd (ONGC), Neravy, Karaikal and Dr. A. Mariappan, Deputy Manager, Chemistry Department, Anthem BioSciences, Bengaluru addressed the students. They gave exposure to various openings and synthesis of drugs in the Pharma Industry, integration of computer simulations to solve chemistry problems and opportunities in ONGC.

An Interdisciplinary Guest Lecture was jointly organized by the Department of Chemistry Shift-II and the Department of Physics on 24.01.2024. Dr. Narayana Sastri Somanathan from CLRI Chennai gave a talk entitled “Polymeric Semiconductors for Flexible Organic Optoelectronics and Light Emitting Liquid Crystals”.

13th Chemistry Proficiency Examination (CPE-2024) was conducted on 18.02.2024 for the PG Students in association with Prof. Rama Subbu Jaya Raman foundation. 34 PG students participated from various colleges of Tirunelveli District.

Valediction of the Chemistry Association was held on 27.02.2014. Dr. Nagarajan Srinivasan, Assistant Professor, Department of Chemistry, MS University gave a talk on 'Alternative Fuels for Future Energy Generation'.

TABLE.8.a . PAPERS PUBLISHED IN JOURNALS (2023.2024)

S. NO	Name of the Teacher	Name of the Department	Title of the Paper	Name of the Journal	Volume No/ Issue No/ Page No /year	ISSN No. / e.ISSN No.	Cited in Web of Science / Scopus Indexed/UGC Approved / Not Found in UGC.CARE List	National / Internationa l	Impac t Factor	Mont h & Year of public ation
01.	Dr.A. Jerold Antony	Chemistry	Role of Deep Eutectic Solvent in the surface modification of Yttria based WO ₃ based Nanocomposite for Application in Nanoarchitectonics	Ceramics International Part.B	Vol;49/Issue. 22/ Page No; 36189.36198	0272.8 842	Web of Science/Scopus/ Science Direct	International	5.2	Novem ber 2023
02.	C. Maria Magdalane	Chemistry	Europium decorated hierarchical TiO ₂ heterojunction nanostructure with enhanced UV light photocatalytic activity for degradation of toxic industrial effluent	Inorganic Chemistry Communications	Volume 157 Page.111339	1387.7 003	Web of Science/Scopus/ Science Direct	International	3.8	Novem ber 2023

TABLE.8.b – PAPERS PUBLISHED IN CONFERENCE / SEMINAR PROCEEDINGS (2023.2024)

S. No	Name of the Teacher	Department	Title of the Paper	Title of the Proceedings	National / International	(Place, Publisher, Year, Page No.)	ISSN / ISBN No.
01.	Dr.A. Anto Arockia Raj	Chemistry	Phytochemical and Chromatographic Analysis of <i>Wrightia tinctoria</i> leaves	Catalysing Nanoscience for Greener Innovation	International	.	.

TABLE 9 . BOOKS / BOOK CHAPTERS PUBLISHED (2023- 2024)

S. No	Name of the Teacher	Department	Title of the Books / Proceedings	Title of Book Chapters	Place, Publisher, Page No.	National / International	ISSN / ISBN No.	Month & Year of publication
01	Dr. C. Christopher	Chemistry	Advances in dye degradation	Effect of electrode materials in decolorization of dyestuffs from wastewater	Singapore, Bentham Science Publishers Pte. Ltd., Vol 1, 108 . 142	International	978.981. 5179.54. 5	December, 2023