



# ST. MARY'S COLLEGE (AUTONOMOUS)

RE-ACCREDITED WITH 'A' GRADE BY NAAC

THOOTHUKUDI- 628001, TAMIL NADU

PG DEPARTMENT OF CHEMISTRY

NEWSLETTER  
Academic Year 2023-2024



## EDITORIAL TEAM

**Dr. J. Antony Rajam**

Coordinator & Assistant Professor of Chemistry

**Dr. C. Zozimus Divya Lobo**

Assistant Professor of Chemistry

**Ms. D. Carolin Jeniba Rachel**

Assistant Professor of Chemistry



## HOD'S Message

Dear Student sand Faculty of the PG Department of Chemistry, I am very glad to share the latest updates and achievements from our department. With four dynamic and dedicative faculty members in the department, We offer great exposure to the learners for exploring new ideas in research and recognizing opportunities in various fields.

- Our department has organized a workshop on "Research and Teaching Methodology". Approximately 215 PG students (both regular and SSC) and research scholars from our college and staff members have benefited from the workshop.
- The School of Physical Sciences with Internal Quality Assurance Cell have organised a Poster Making Competition and a Human Chain to create awareness on the Importance of Millets and Millet based Products.
- We visited CSIR-Central Electrochemical Research Institute, Karaikudi and Kannan Devan Hills (P) Ltd, Munnar.
- Our students has successfully completed the "Industrial Training" and organized by Sai Mirra Innopharm Pvt. Ltd., Chennai and "Summar Training Program in Chemistry" (STPIC-2023) organized by The Academy of Sciences, Chennai.
- One of the students has won the third place in poster making competition conducted by the Schools of Physical Sciences, St. Mary's College (Autonomous), Thoothukudi.
- Our students have presented their papers in International Conferences.
- They have published their abstracts and papers and five students published their Abstracts and papers in the Proceedings with ISBN.
- Our students have shown outstanding performance in MOOC exams with Elite grade, further enhancing their skills and knowledge.
- Two students were placed as Trainees in different companies at Chennai.
- One of our staff members has acted as Judge for Poster presentation, Reviewer in peer review process of the journal and Ph.D. thesis evaluator at Bharathiar University, Coimbatore.
- We are proud to announce a 100% pass rate in the final exams, demonstrating our students' hard work and the unwavering support of our faculty.
- One of our staff members has published a book with ISBN.
- Our faculty members have presented and published papers at prestigious conferences and in reputed journals, contributing significantly to academic discourses.

I extendmy heartfelt congratulations to all our students and facultyfor their achievements. Let us continue to strive for even greater heights in the upcoming years.

Thank you for your cooperation and support.

Warm regards,

**Dr. J. Antony Rajam**

Coordinator and Assistant Professor

## DEPARTMENT ACTIVITIES

- The School of Physical Sciences (Regular & SSC) and Internal Quality Assurance Cell jointly organised a Poster Making Competition on the theme "Importance of Millets and Millet based Products" on 08.08.2023 at 11.30 a.m. in Physics Laboratory. The competition encouraged creativity and highlighted the health benefits of millet consumption. 25 students (Both regular and SSC) from various departments have participated. G. Monisha Rose of II M.Sc. Mathematics (SSC), M. Ibrahim Mohshina of III B.Sc. Computer Science and V. Sathya of III B.A. English Literature (SSC) have won the First, Second and Third prizes respectively.
- The School of Physical Sciences (Regular & SSC) and Internal Quality Assurance Cell jointly organised a Human Chain to create awareness on the Importance of Millets and Millet based Products on 09.08.2023 at 11.05 a.m. in the college premises. Rev. Dr. Sr. C. Shibana, The Secretary, Rev. Dr. Sr. Jessie Fernando, The Principal, Rev. Sr. Josphine Jeyarani, The Director (SSC), staff members of School of Physical Sciences and about 250 students (Both regular and SSC) from various departments have participated.
- The PG Department of Chemistry organized its Association Meeting on "Green Chemistry - An ultimate approach to save us and future generations" on 25-09-2023 at 1.10 P.M. Dr. K. Arunprasathlingam, Assistant Professor, Department of Chemistry, Kamaraj College, Thoothukudi was the resource person.
- The PG Department of Chemistry (SSC) organised workshop on "Research and Teaching Methodology" on 13-10-2023 at 11.00 a.m. in the Conference Hall. Dr. J. Maria Prema, M.Ed. Co-ordinator & Assistant Professor Education, St. Ignatius College of Education (Autonomous), Palayamkottai was the resource person. It offered practical strategies for enhancing research and teaching skills. Approximately 215 PG students (both regular and SSC) and research scholars from our college and staff members have benefited from the workshop.
- The PG Department of Chemistry organized its Association Meeting on "Crucial Topics of Inorganic Chemistry in Competitive Exams" on 14-02-2024 at 10.30 a.m. Dr. A. Anto Arockia Raj, Assistant Professor and Coordinator of Chemistry, St. Xavier's College (Autonomous), Palayamkottai was the resource person.



## CHEMISTRY LABORATORY

The chemistry laboratory helps students to develop essential skills such as handling glasswares with precision and care. It trains them to use heating tools while observing chemical reactions. Students learn to measure and mix chemicals accurately and to improve their analytical and observation skills. The lab environment emphasizes the importance of safety practices, such as wearing goggles and gloves, handling spills and using first aid when necessary. Through hands-on experiments, students build confidence in following protocols, troubleshooting issues and applying theoretical knowledge to practical scenarios.

## MENTOR MENTEE SYSTEM

The system is a move towards Student Support and Progression. It purports to achieve holistic development of every student in the department. A teacher has a group of students whose academic and other aspects of their progress are her concern. The teacher takes care to concentrate more on issues related to their psychological needs during periodical Tutor- Ward Meet each Friday from 2. 30 p.m. to 4.00 p.m. A record of academic results and bio-data of each of the students is maintained.

## PTA & ALUMNAE MEET DATES

The Parents Teachers Association conducted meetings regularly for all the parents and students of the department. The meeting was held for II M.Sc. on 15.12.2023. The Marian Alumnae Meet was organised on 13. 04. 2024. The Principal and the President of OSA Rev. Sr. Dr. Jessie Fernando presided over the meeting Rev. Sr. Tresa Mary, Mother Superior, St. Mary's college convent was invited as the Chief Guest.

## BOARD OF STUDIES

The Board of Studies Meeting of the P.G. Department of Chemistry was conducted on 1st February 2020 at 10.30 a.m. in the Department of Chemistry. The subject experts of the board were Dr.M. George Johnson, Head & Associate Professor of Chemistry, Loyola College (Autonomous), Chennai, Dr. S. Joseph Selvaraj, Associate Professor of Chemistry, St. Joseph's College (Autonomous), Trichy, Dr. R. Murugesan, Associate Professor of Chemistry, TDMNS College, Kallikulam, Tirunelveli and Dr. J. Sidharthan, Associate Professor of Chemistry, V.O.C College, Thoothukudi, the university nominee was Dr. K. Swarnalatha, Associate Professor of Chemistry, Manonmaniam Sundaranar University, Tirunelveli and the alumna representative was Dr. J. Rajula Jasmine Usha, Associate Professor of Chemistry, Sarah Tucker College (Autonomous), Tirunelveli. The Syllabus was designed in the pattern of Outcome Based Education with Choice Based Credit System. The board acknowledged and approved the set pattern.



| Semester | Date       | Semester | Date       |
|----------|------------|----------|------------|
| ODD      | 01.07.2023 | EVEN     | 20.01.2024 |
|          | 15.07.2023 |          | 27.01.2024 |
|          | 26.08.2023 |          | 03.02.2024 |
|          | 16.09.2023 |          | 02.03.2024 |
|          | 23.09.2023 |          | 04.03.2024 |
|          | 14.10.2023 |          | 23.03.2024 |
|          | 20.01.2024 |          | 06.04.2024 |



## STAFF ACTIVITIES

| Name of the Faculty          | Publications |       |                      | Conference | Seminar / Webinar | Workshop | F D P |
|------------------------------|--------------|-------|----------------------|------------|-------------------|----------|-------|
|                              | Book         | Paper | Papers in Proceeding |            |                   |          |       |
| Dr. J. Antony Rajam          | 1            | 2     | 1                    | 1          | 3                 | 2        | 6     |
| Dr. C. Zozimus Divya Lobo    |              |       |                      |            | 1                 |          |       |
| Ms. D. Carolin Jeniba Rachel |              |       | 5                    | 4          | 2                 | 2        | 4     |

## RESOURCE PERSON

| Name                | Programme   | Role                         | Date                    |
|---------------------|---|------------------------------|-------------------------|
| Dr. J. Antony Rajam | Advanced Materials and Their Applications 2023 (ICAMA'23)   | Judge for Paper presentation | 14.12.2023 & 15.12.2023 |
|                     | Member of the board of examiners for adjudicating the Ph.D. thesis at Bharathiar University, Coimbatore                 | Thesis Evaluator             | 2023                    |
|                     | Reviewer in the peer review process of the Journal, <i>Egyptian Academic Journal of Biological Sciences, B. Zoology</i> | Reviewer                     | 2023                    |

### INDUSTRIAL VISIT

PG Department of Chemistry organized an Industrial visit for the five students of II M.Sc. along with III B.Sc. Chemistry students as a part of their curriculum. The specialists described the principles and operation of the 3D metal printer, cyclic voltammogram, corrosion and materials protection, redox flow battery testing lab, and online structural health monitoring system. They also describe how various battery types are assembled, how they work, and how to assess their performance. Two faculty members escorted the students to CSIR-Central Electrochemical Research Institute, Karaikudi On 1st December 2023. A practical experience and insights into electrochemical research and its applications were gained from the visit. The objective was to provide the students in the course which focused on research methodology and chemical instrumentation a hands-on introduction. The students' real-world experiences helped them relate to and understand the course material.

On 15th March 2024, another industrial visit was arranged to Kannan Devan Hills (P) Ltd, Munnar, with 43 students and 7 faculty members participating. This visit offered a practical understanding of the tea industry and its operational processes.



## STUDENTS ACTIVITIES

### Competition

Suriya C. S of II M.Sc. Chemistry has won the third place in poster making competition titled "Importance of Millets and Millet based Products" conducted by the Schools of Physical Sciences, St. Mary's College (Autonomous), Thoothukudi.

### Paper Presentation

- Johncy. P of II M.Sc. Chemistry has successfully completed the "Industrial Training" organized by Sai Mirra Innopharm Pvt. Ltd., Chennai from 22nd May 2023 to 2nd June 2023.
- Five PG students have attended virtually the "Summer Training Program in Chemistry" (STPIC-2023) organized by The Academy of Sciences, Chennai held from 3rd June to 17th June 2023.
- All the students of II M.Sc. presented their papers in International Conference on "Advanced Materials and their Applications 2023 (ICAMA'23)" on 14th & 15th December 2023. Arockia Mashina published her paper and five students published their Abstracts in the Proceedings with ISBN.
- Johncy. P of II M.Sc. Chemistry has presented her paper in the International Conference Recent Advancements in Material Science and Nuclear Energy Research (ICRAMNR) on 16th February 2024 and published her abstract in the proceedings with ISBN.

### Quiz Competitions

Students actively participated in various quiz competitions, showcasing their knowledge across diverse topics. On 21st June 2023, three students competed in the International Yoga Day Quiz organized by St. Mary's College, Thoothukudi. N. Amala Jothi Nirosha represented the institution in the Azide and Nitro Compound Quiz held at St. Xavier's College, Palayamkottai, on 26th June 2023. Another team of three students participated in a quiz on Amino Acids and Proteins on 8th August 2023, hosted by St. Xavier's College. On 10th September 2023, J. Arockiya Mashina joined the Polymer Chemistry Quiz at the same venue, followed by her participation alongside R. Deliciya in the Thermodynamics Quiz on 12th September 2023. Lastly, four students took part in the Non-Violence Quiz commemorating the International Day of Non-Violence on 1st October 2023, organized by St. Mary's College. These events provided platforms for academic enrichment and intellectual growth.

### Workshops and Seminars

Students engaged in enriching workshops and seminars throughout the year. On 11th August 2023, six students attended a National Seminar on AI Tools for Education, organized by St. Mary's College, Thoothukudi. A workshop on Academic Writing: Authenticity and Ethical Imperatives held on 20th September 2023 at the same institution saw the participation of three students, focusing on research ethics and authenticity. Additionally, four students attended another workshop on Research and Teaching Methodology on 13th October 2023, which emphasized modern pedagogical and research techniques. These sessions fostered practical skills and academic excellence.

### International Conferences

Students made significant contributions to international conferences, presenting innovative research. From 14th-15th December 2023, six students participated in a conference organized by V.O. Chidambaram College, Thoothukudi, covering diverse topics such as Tellurium Nanoparticles (N. Amala Jothi Nirosha), Mesoporous Silica Nanoparticles (J. Arockiya Mashina), Crystal Growth and Characterization (R. Deliciya and R. Mandhira Priya), Green Synthesized Hydrogels (P. Johncy), and Biobased Plastics (C.S. Suriya). On 16th February 2024, J. Arockiya Mashina and N. Amala Jothi Nirosha presented their work on Materials Science and Nuclear Energy Research, while P. Johncy discussed Green Synthesis of Hydrogels at a conference organized by Government Arts and Science College, Kovilpatti. These platforms allowed students to engage with experts and explore advanced research trends.



## MOOC & NPTEL

The students of I M. Sc. Chemistry attended MOOC course titled, Industrial Inorganic Chemistry with subject code noc23-cy17 in the duration of 12 weeks (January - April 2023)

The students of II M. Sc. Chemistry attended MOOC course titled, Analytical Chemistry with subject code noc23-cy59 in the duration of 12 weeks (July - October 2023)

| S. No | Register Number | Name of the Students | Percentage |
|-------|-----------------|----------------------|------------|
| 1     | 22SPCH04        | Johny P              | 63 (Elite) |
| 2     | 22SPCH05        | Manthira Priya R     | 75 (Elite) |
| 3     | 22SPCH06        | Suriya C S           | 55         |

| S. No | Register Number | Name of the Students      | Percentage |
|-------|-----------------|---------------------------|------------|
| 1     | 22SPCH01        | Sr. Amala Jothi Nirosha N | 57         |
| 2     | 22SPCH02        | Arockiya Mashina J        | 54         |
| 3     | 22SPCH03        | Deliciya R                | 67 (Elite) |



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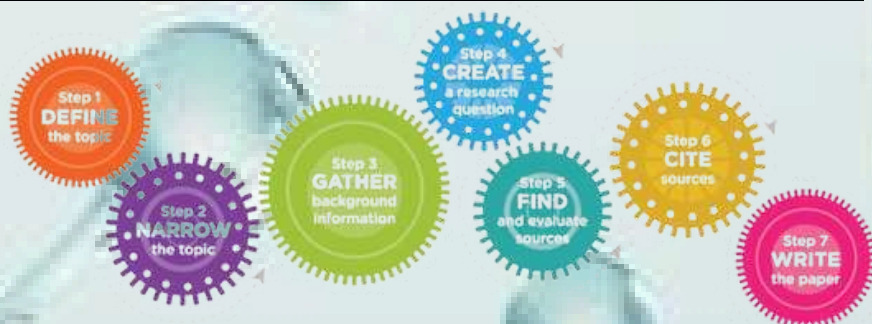
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courses

## PROJECT

A total of six post graduate students of II M.Sc. Chemistry submitted the projects. The details are as follows:

| S. No. | Register No. | Student's Name        | Project Title  |
|--------|--------------|-----------------------|--|
| 1      | 22SPCH01     | Amala Jothi Nirosha N | Bio – synthesis and characterization of TeO <sub>2</sub> Nanoparticles using <i>Tephrosia Purpurea</i> and it's Bio-potentials |
| 2      | 22SPCH02     | Arockiya Mashina J    | Synthesis and characterization of Mesoporous Silica Nanoparticles from <i>Zea Mays</i> waste and it's Antibacterial Activity   |
| 3      | 22SPCH03     | Deliciya R            | Density Functional Theory Analysis of Antihypertension   |
| 4      | 22SPCH04     | Johny P               | Synthesis and characterization of Nano – sized hydrogels and it's antibacterial activity                                       |
| 5      | 22SPCH05     | Mandhira Priya R      | Pharmacophore Analysis of Antihypertension   |
| 6      | 22SPCH06     | Suriya CS             | Synthesis and Characterization of Bioplastic made from Proso Millet ( <i>Panicum Miliaceum</i> )                               |



## PLACEMENT

| Register No. | Name of the Student | Name and Place of the organisation appointed   | Appointed as | Pay package at the time of appointment |
|--------------|---------------------|--|--------------|--|
| 22SPCH04     | Johny P             | TROI Management Consultants Pvt Ltd<br>Addison Paints and Chemicals, Sembium,<br>Chennai | Trainee      | Rs. 11,000/-                           |
| 22SPCH05     | Mandhira Priya R    | Foxconn Hon Hai Technology India Mega<br>Development Pvt Ltd,<br>Sriperumbudur           | Trainee      | Rs. 14,000/-                           |

