



**ST. MARY'S COLLEGE (AUTONOMOUS)**

**(Re - accredited with 'A+' Grade by NAAC – 4<sup>th</sup> Cycle)**

**Thoothukudi - 628001, Tamil Nadu, India**

**(Affiliated to Manonmaniam Sundaranar University)**

*Department of Chemistry*

*Newsletter*

*2019-2020*

**Editorial Board**

*Dr. J. Martin Rathi (HOD)* Associate Professor

*Dr. J. Linda Fernando,* Associate Professor

*Mrs. S. Rani Jeyamary,* Assistant Professor

*Dr. Irudaya Antonat Sophia,* Assistant Professor

*Dr. A. Lakshmi,* Assistant Professor

*Dr. B. Divya,* Assistant Professor

*Dr. A. Parveen Sulthana,* Assistant Professor

*Dr. G. Amala Jothi Grace,* Assistant Professor

### Activities of the Association

Association meeting was held on 17<sup>th</sup> December, 2019 in the Fatima hall at 12.30 p.m. on the topic “Photochemistry-Fundamentals and applications” Dr.K. Swarnalatha, Associate Professor of Chemistry, Manonmanium Sundaranar University, Tirunelveli was the resource person. She gave a clear introduction about energy and how it is classified, explained various laws like Stark-Einstein law, Grotthuss-Draper law and Beer-Lambert law, concepts like fluorescence, phosphorescence, chemiluminescence, thermoluminescence, and bioluminescence and also about wavelength and frequency of light. The principle of photosynthesis was explained in terms of photo chemistry.



Association meeting was held on 4<sup>th</sup> February 2020 in the star hall at 2 p.m. on the topic “Basic Concepts of Group Theory” Dr.P.Sami, Associate Professor, Department of Chemistry, VHNSN College Virudhunagar was the resource person. He explained basic concepts like symmetry elements, symmetry operations in group theory with 3D models. He also enumerated easy ways of assigning point group to molecules and character table too.



### **Guest Lecture**

**18<sup>th</sup> February, 2020**

A guest lecture on “Laboratory Safety Measures” , sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized by Marian Star Centre, Department of Chemistry on 18<sup>th</sup> February 2020 in the Fatima hall at 12 noon. Mr.D.C.Sathyanarayanan, Senior Executive, Safety Department, SPIC Pvt. Ltd. , Thoothukudi, was the resource person



**5<sup>th</sup> February, 2020**

A guest lecture on “Story of Some Interesting Crystals” , sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 5<sup>th</sup> February, 2020 in the Botany

lecture hall at 2.30P.M. Dr.J.Sidharthan, Associate Professor, Department of Chemistry, V.O.Chidambaram College, Thoothukudi was the resource person.



#### **4<sup>th</sup> February , 2020**

A guest lecture on “Basic Concepts of Group Theory”, sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 4<sup>th</sup> February, 2020 in the star hall at 12 noon. Dr. P. Sami, Associate Professor, Department of Chemistry, VHNSN College, Virudhunagar was the resource person.



#### **19<sup>th</sup> December,2019**

A guest lecture on ““Concept of Spectroscopy and its applications” , sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 19<sup>th</sup> December, 2019 in the Fatima hall at 12.30P.M. Dr.N.Raman, Associate Professor, Department of Chemistry, VHNSN College, Virudhunagar was the resource person.



**17<sup>th</sup> December, 2019**

A guest lecture on “Photochemistry-Fundamentals and applications”, sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 17<sup>th</sup> December, 2019 in the Fatima hall at 12.30P.M. Dr.K. Swarnalatha, Associate Professor of Chemistry, Manonmanium Sundaranar University, Tirunelveli was the chief guest.



Guest lecture on “Development of nanoparticles and its applications” sponsored by Department of Biotechnology, Govt. of India, New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 16<sup>th</sup> August, 2019 in the star hall. Dr.C.Vedhi , Assistant Professor of Chemistry, V.O.Chidambaram College, Thoothukudi was the resource person.



### Seminars/Workshop

**13<sup>th</sup> December, 2019**

A One Day Seminar on “Electrochemical Technology”, sponsored by Department of Biotechnology, Govt. of India, and New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 13<sup>th</sup> December, 2019 in the Pearl Conference hall.

In the fore noon Prof. Dr. G. Paruthimal Kalaignan Senior Professor & Head, Department of Industrial Chemistry, School of Chemical Sciences, Alagappa University, Karaikudi, was the resource person. In the fore noon ,session I he delivered a lecture on “Batteries and Fuel Cells”. In session II he gave a lecture on the topic “Corrosion and Electroplating”.

In the afternoon Dr.S.Senthil Kumar, senior scientist, CECRI, Karaikudi was the chief guest. In the first session he delivered a lecture on the topic “Fundamentals of Electrochemistry at Electrode-

**16<sup>th</sup> August, 2019**

Electrolyte Interface” and in session II he gave a lecture titled “ Overview of Electroanalytical Techniques Towards Advanced Analytical Applications” .



**12<sup>th</sup> December,2019**

One Day Faculty Training Programme on “Soil Analysis”, sponsored by Department of Biotechnology, Govt. of India, New Delhi was organized under Star College Scheme Programme by Marian Star Centre, Department of Chemistry on 12<sup>th</sup> December, 2019 in the star hall. In the first session Dr. S. Jothimani, Professor, Agricultural College and Research Institute , Killikulam, Vallanadu delivered a lecture to the Chemistry students on “Soil Analysis”. Students of III B.Sc., Chemistry and II B.Sc., Chemistry attended the lecture.

In the second session hands on Training on “ Soil Analysis” was given by Mr.T.S.R.Murthy, Nagarjuna Agrochemicals Pvt.Ltd., Senior Research Fellow, Soil Science, Hyderabad to the faculty members.



**24<sup>th</sup> September,2019**

One day workshop on “Microscale Techniques in Chemistry” was organised under Star College Scheme Programme by Marian Star Centre, Department of Chemistry, St. Mary’s College (Autonomous), Thoothukudi as a part of Star College Scheme, sponsored by the Department of Biotechnology, India. Dr.S.Murugan, Retired professor of Chemistry, S.T.Hindu College, Nagercoil trained the participants of the workshop on Microscale Techniques in Chemistry experiments.





**18<sup>th</sup> July,2019**

One Day Workshop on “Chemist as Entrepreneur” cum Hands on Training on “ House Hold Articles” sponsored by Department of Biotechnology, Govt. of India, New Delhi under Star College Scheme Programme was organised by Marian Star Centre, Department of Chemistry, St.Mary’s College (Autonomous), Thoothukudi on 18<sup>th</sup> July, 2019 in the star hall. Mr.K.C.Gurusamy, M.D ,Sega Plascan Exports ,Virudhunagar was the resource person. In the next session in-house hands on training was held for the students on various house hold articles.



## *Staff Activities*

### **Seminars / Workshops/ Conference attended by faculty**

- **Dr.S.Rani Jeyamary** participated in the UGC sponsored Refresher course in chemistry, Theme: Physical Methods in Chemical Sciences, conducted by the UGC – Human Resource Development Centre, Madurai Kamaraj University held from 13.02.2009 to 26.02.2009.
- **Dr. Irudaya Antonat Sophia** participated in the United Board of Christian Higher Education in Asia Sponsored National Workshop on “**Advanced Leadership Training for the Heads of Rural Institutions**” organized by the Research Committee, Nesamony Memorial Christian College, Marthandam on 6 to 8.02.2020.
- **Dr. A.Lakshmi and Dr.A.Parveen Sulthana** have participated in UGC sponsored 107<sup>th</sup> Orientation Programme (Batch -I) organized by UGC Human Resource Development Centre, Bharathidasan University, Tiruchirapalli from 12.11. 2019 to 2.12.2019.
- Dr.G. Amala Jothi Grace has participated in the National Seminar on “**Inimitability of Action Research in Educational Institutions**” organised by the Centre for Teacher Resource and Academic Support, School of education under the scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (MHRD Project), Manonmaniam Sundaranar University, Tirunelveli on 14.11.2019 to 15.11.2019.
- Dr.J.Martin Rathi has presented a paper on the title “**Pharmacognostical Characterisation of three medicinal plants**” at 7<sup>th</sup> Global conference on Applied Microbiology and Biotechnology held during 18.11.2019 to 19.11.2019 in Rome, Italy.
- **Dr.Irudhaya Antonat Sophia** has attended **UGC Sponsored 89<sup>th</sup> Orientation Programme** organized by M.K University, Madurai from 10-10-2019 to 30-10-2019.
- **Dr.A.Lakshmi and Dr.A.Parveen Sulthana** attended the National Workshop on “**Writing Research Proposals for funded projects**” organized by Marian Research Forum” St.Mary’s College (Autonomous), Thoothukudi on 14.09.2019.
- **Dr. G. Amala Jothi Grace** attended a International Conference on “**Advanced Materials**” and presented a paper “ Investigation of corrosion Inhibitor using flower extract of Cassia Auriculata plant on Mild Steel in Thoothukudi Sea water” on 26.08.2019 at Aditanar College of Arts and Science , Virapandianpatnam, Tiruchendur.

- **Dr.A.Parveen Sulthana** attended a three day Capacity Building Workshop on “Enhancing Skills of Teaching for Young Higher Education Teachers” (WEST) conducted by the Centre for Teacher Resource and Academic support, School of Education under the scheme of PMMMNTT, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu on 29.07.2019 -31.07.2019 2019.

### *Intercollegiate Quiz Competition*

#### *PhysChem Quiz*

**14<sup>th</sup> August, 2019**

Marian Star Physchem Quizzle'19 sponsored by Department of Biotechnology, Govt. of India, New Delhi was organized under Star College Scheme Programme by Marian Star Centre, School of Physical Sciences on 14<sup>th</sup> August, 2019 in the Auditorium. Students from eight neighbouring colleges participated enthusiastically. Online preliminary round test was held in the DST –FIST computer lab at 10.30 A.M to select five qualifying teams. The results of the qualified teams were announced at 11.00A.M and the Marian Star Physchem Quizzle'19 was conducted. Prize winners were announced and the prizes were given by Dr. Sr. A.S.J. Lucia Rose, Principal.



## Field/Industrial Visit/Training programme

**28<sup>th</sup> February, 2020**

### **NIIST Laboratory visit**

Students of III B.Sc., Chemistry (43 students) accompanied by three staff members visited National Institute of Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram on 28<sup>th</sup> February, 2020.



**23<sup>rd</sup> -31<sup>st</sup> December, 2019**

### **Training programme**

Four students from II B.Sc., Chemistry (Munieswari.T, Ponselvi.S, Jesline Jenitha. S, Angel Selciya.J) attended an inplant training programme under star scheme sponsored by Department of Biotechnology, Govt. of India, New Delhi on from 23<sup>rd</sup> -31<sup>st</sup> December, 2019 at Kalpaka Chemicals Pvt.Ltd., Thoothukudi .

**16<sup>th</sup>-20<sup>th</sup> December, 2019**

### **Training programme**

Five students from II B.Sc., Chemistry (Anto Thereshinal. T, Maria Hannah.A, Jemima.P Jebima.J) attended a training programme under star scheme sponsored by Department of Biotechnology, Govt. of India, New Delhi on “ Biochemical Analysis of Food” from 16<sup>th</sup> Dec. 2019 till 20<sup>th</sup> December,2019 at Fisheries College and Research Institute, Thoothukudi .

**16<sup>th</sup> -19<sup>th</sup> December, 2019**

**Training programme**

Four students from II B.Sc., Chemistry (Josephin Preethi.M, Kanthalakshmi.K, Bala Abirami.M, Anna Packiam.R)attended a inplant training programme under star scheme sponsored by Department of Biotechnology, Govt. of India, New Delhi on from 16<sup>th</sup> -19<sup>th</sup> Dec. 2019 at DCW, Sahupuram, Thoothukudi .

**11<sup>th</sup> December, 2019**

**Industrial visit to SPIC, Thoothukudi**

Students of III B.Sc., Chemistry (45 students) along with three staff members visited SPIC Pvt. Ltd., Thoothukudi on 11<sup>th</sup> December ,2019.



**12<sup>th</sup> September 2019**

**Field visit to 20 MGD WSS, TWAD Board, Manjaneerkayal**

Students of II B.Sc., Chemistry ( 48 students) accompanied by two staff members visited 20MGD WSS plant, TWAD Board, Manjaneerkayal on 12<sup>th</sup> September, 2019 under Star College Scheme Programme.



## INTERNATIONAL CONFERENCE

**30<sup>th</sup> and 31<sup>st</sup> January, 2020**

International Conference on Advanced Materials (ICAM 2020) was organized under Star College Scheme Programme by Marian Star Centre, School of Physical Sciences on January 30<sup>th</sup> and 31<sup>st</sup>, 2020.

Dr.M.Umadevi, Associate Professor and Head In-Charge, Department of Physics, Mother Teresa Women's University, Kodaikanal, Dr.C.Vedhi, Assistant Professor of Chemistry, V.O.Chidambaram College, Thoothukudi, Dr. K. Krishnamoorthy, Scientist, Polymers and Advanced Materials Laboratory, National Chemical Laboratory, Pune, Dr. R. Ramesh Babu, Associate Professor, Department of Physics, Bharathidasan University, Tiruchirappalli. Dr.P.Rajesh, Assistant Professor, Department of Physics, SSN College of Engineering, Chennai, **Dr. Suguna Perumal, Research Professor, Department of Applied Chemistry, Kyungpook National University, Daegu, South Korea**, Dr.A.Chandra Bose, Associate Professor and Head, Department of Physics, National Institute of Technology, Tiruchirappalli and Dr. A. Samson Nesaraj, Professor, Department of Applied Chemistry, Karunya Institute of Technology and Sciences, Coimbatore were the resource persons.



## CDP

**10<sup>th</sup> August 2019**

II B.Sc Chemistry Students with two of our staff members Dr.T.Linda Fernando, Dr.G.Amala Jothi Grace visited the adopted area Antonyarpuram. The students were divided into groups and the village survey was taken. Then our students interacted with the school students. Also, we interacted with the people to know about their livelihood. Then we met Father. Albin Antony to know about the people and their needs. After the meeting, it was decided to give training for the people on Palm products.



**12<sup>th</sup> August 2019**

The co-ordinator for CDP TOUCH Dr.Sr.Kulanthai Therese, Dr.T.Linda Fernando, CDP Incharge of Chemistry and Ms. Rajathi, Star foundation, Thoothukudi had a meeting with Rev.Fr.Albin Leon, the parish priest of Antonyarpuram to discuss the various plans and actions to be taken during CDP-TOUCH visit of our department. It was decided to conduct awareness programme on plastic and hygiene and some usefull programme for children.



**19<sup>th</sup> August 2019**

Grama Panchayat Meet was held on 19<sup>th</sup> august 2019 at antonyarpuram headed by Rev.Fr.Albin Leon, the parish priest of Antonyarpuram. The co-ordinator for CDP TOUCH DR. Sr.Kulanthai Therese, Dr.T.Linda Fernando, CDP Incharge of Chemistry attended the meeting to discuss the needs of people of Antonyarpuram. They insisted on a separate bus stop as well for the drainage system for rain water. It was decided that a workshop on Palm Products may be conducted for group of underprivileged people.





**25<sup>th</sup> September 2019** CDP- TOUCH programme was organised to create awareness about the plastics. The students of II B.Sc Chemistry , staff members Dr.T.Linda Fernando, Dr.G.Amala Jothi Grace gathered in Antonyarpuram. A rally was organised with help of father Albin Antony. The people of Antonyarpuram including children participated enthusiastically along with our students. Videos about the ill effects of plastics were screened to them. Free cloth bags sponsored by Velavan Hypermarket were distributed to them. A speech on Plastic Ban was delivered by Dr.G.Amala Jothi Grace. Students collected plastic materials thrown on street. The meeting came to an end with an awareness song.



**5<sup>th</sup> October 2019**

CDP- TOUCH was conducted on 5<sup>th</sup> October 2019 at Antonyarpuram Village. The students of II B.Sc Chemistry had explained the preparation of Vermicompost using vegetables and fruits waste, dried plant leaves, cow dung. The people of antonyarpuram village participated eagerly to know about the vermicompost preparation. Also, the students distributed the handprints on the decomposition period of various articles and kitchen wastes used for vermicompost.



Latitude: 8.77512  
Longitude: 78.084783  
Elevation: 9.51m  
Accuracy: 3.2m  
Time: 10-05-2019 10:02  
Note: cdp



Latitude: 8.775403  
Longitude: 78.086006  
Elevation: 9.46m  
Accuracy: 4.6m  
Time: 05-10-2019 10:27

## **29<sup>th</sup> February 2020**

- Science Day Celebration was organized in the adopted area on 29<sup>th</sup> February 2020. Under the title, Every Scientist has a Story, the students of Chemistry gave the importance of science and scientist. Yoga training was given to the school students of anthonyarpuram, Thoothukudi.

## **BOARD OF STUDIES MEETING**

The Board of Studies Meeting of the Department of Chemistry was conducted on 1<sup>st</sup> February 2020 at 10.30 a.m in the Department of Chemistry. Dr.K.Swarnalatha, Associate Professor, Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli as University Nominee. Dr. M.George Johnson, Associate Professor & Head, Department of Chemistry, Loyola College (Autonomous), Chennai as Subject Expert. Dr. R. Murugesan, Associate Professor, Department of Chemistry, TDMNS College, Kallikulam, Tirunelveli district as Subject Expert. Dr. J. Sidharthan, Associate Professor, Department of Chemistry, V.O.C College Thoothukudi as Subject Expert. Dr. Mrs. J. Rajula Jasmine Usha, Associate Professor, Department of Chemistry, Sarah Tucker College (Autonomous), Tirunelveli as Alumna.

## **PTA Meeting**

The Parents Teachers Association conducted meetings regularly for all the parents and students of the Department. The meetings were held on 17<sup>th</sup> August 2019.

## **Certificate Course**

Basic Computer Techniques in Chemistry was offered as Certificate course for the II B.Sc Chemistry students from July 2019 to March 2020. Ms. Zozimus Divya Lobo was the instructor. Students were given training on using MS word, Excel and powerpoint. They impart knowledge about the importance of techniques in chemistry and websites. Students were evaluated by giving practical test at the end of the course. They were given certificates with their grades based on their performance. 48 students were benefitted out of this course.

St. Mary's College (Autonomous), Thoothukudi  
(Reaccredited with A+ Grade by NAAC)

Certificate Course 2019-2020

Name of the Department : Chemistry

Title of the Course : Basic Computer techniques in Chemistry

Offered to : II B.Sc Chemistry

Course Code: 18CACH31

This course helps the students to learn the basic techniques of computer in Chemistry.

Objective :

- To practice MS word, Excel , powerpoint
- To impart knowledge about the websites in chemistry
- To create an awareness about the importance of technology in chemistry

Outcomes :

- Students will learn MS word, Excel , powerpoint
- Students will gain knowledge of the websites in chemistry
- Students become an expert in using the technology
- They can be employed as expertise in office automation

St.Mary's College (Autonomous) Thoothukudi

(Reaccredited with A+ Grade by NAAC)

Certificate Course 2019-2020

**Name of the Department : Chemistry**

**Title of the Course : Nutritional Food Science**

**Offered to : III B.Sc Chemistry**

**Course Code: 18CACH51**

*This course helps the students to comprehend the diet plans and nutrition requirements to lead a healthy life.*

**Objective :**

- To practice a proper balanced diet
- To impart knowledge about Nutrition and its importance
- To create an awareness about the use of adulterants in food products

**Outcomes :**

- Students will learn to prepare nutritional food by their own
- Students will gain knowledge of calories required for healthy diet
- Students become an Entrepreneur in preparation of food products
- They can be employed as Food analyst

### *Student Participation*

- **Ms. P.Monisha** of III BSc Chemistry attended CATC camp at Idayarpatti, Madurai from 1.10.2019 to 10.10.2019.
- **Ms. P.Shalu** of II BSc Chemistry attended basic leadership camp from 1.09.2019 to 10.09.2019 at Sardar Vallabhai Patel Textile and management, Coimbatore.
- **Ms. P.Shalu and Ms. A. Mary Iswarya** of II BSc Chemistry attended Annual training camp at Sarah Tucker College, Tirunelveli from 21.5.2019 to 30.5.2019.
- **Ms. J. Ebsiba Jesmila and Ms. S. Varsha Antanitta** of I BSc Chemistry participated and secured second place in கழலும் சொல்லரங்கம் competition conducted by Wavoo Wajeetha Women's college, kayalpatnam on 24.01.2019.
- **Ms. A. Panimaya Rosy, Ms. A. Deloshini and Ms. R. Mandhira Priya** I BSc Chemistry participated in poetry competition conducted by Tanishq, Tuticorin and obtained certificate of appreciation.

### **Placement & Higher Education**

S.No	Academic Year	No. of students placed	No. of students selected for Higher Studies
1	2019-2020	4	8 (M.Sc.,) +1(Arabic college) +1(Ph.D)

Year	Names	Higher studies	Name of the Employer with contact details	Package received
2019-2020	P.V.VijayaRani	Ph.D V.O.C		
	Abirami.E (2016-2019)		Sam salt works Vaippar 8778509209	Rs.6000/-
	Anantha Sundari.P	M.Sc V.O.C.College		

	Cynthiya Mary		Kamak School 9751226555	Rs.7000
	Infanta.E	M.Sc		
	Kalaiarasi.M		Kalpaka Chemicals 9865460783 9385320783	Rs.12,300/-
	Logha Priya	M.Sc V.O.C.College		
	Makreena.J	M.Sc St .Mary's College		
	Maria Bright Helina.A	B.Ed St. Thomas College		
	Nawrose Fathima.N	Arabic College 9944702679		
	Pasungkili .G		Kalpaka Chemicals 6381713516	Rs.12300/-
	Santhiya.P	M.Sc V.O.C		
	SaravanaPriya.E	M.Sc M.S.University		
	Sathya.A	M.Sc V.O.C		