



RASATHANTHRA



Golden Jubilee Souvenir

VOLUME III

2017

Vision

The Post graduate Department of Chemistry endeavors to be a role model for educating and empowering students, prepared to compete in and contribute to the ever-changing, technology-centered world of the 21st century by delivering high quality teaching, research and community services.

Mission

The Post graduate Department of Chemistry pledges itself to encourage in the broadest and most liberal manner towards the advances in chemistry through education by providing our students with quality education, projects, research and career orientation. With a high standard for excellence in all these areas, the Department produce students who have a keen interest in chemistry and can think critically.

Milestones

- M.Sc. Pure chemistry was started in the year 2013-14 and the dept was raised to post graduate status
- Approval of Research guideship and achievement of research award to faculty members inspired students and opened before them new doors of research oppurtunities
- Installation of smart class rooms well equipped laboratories promoted innovative curriculum development while exposing students to advanced technology



Post Graduate Department of Chemistry St Teresa's College (Autonomous) Ernakulam



The fear of god is the beginning of wisdom

Post Graduate Department of Chemistry of St Teresa's college is completing its five long decades of imparting top notch scientific education and contributing extremely competent, socially responsible women to the scientific world and society. The entire fraternity of the department looks forward to celebrate this grand occasion in befitting manner by organizing various events including International and national seminars, Women empowerment programmes, career guidance classes, lecture by experts and various social outreach activities. To commemorate the occasion of golden jubilee we are delighted to have a souvenir to record this historic event. The souvenir provides a glimpse into the past glorious years and reflect on the events and programs making each page of "Rasathantra" full of life.

Golden Jubilee Year Celebrations

2016-2017

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It is a matter of great satisfaction for the department of chemistry that during last 50 years it had developed a number of innovations in the teaching and research that have contributed to the overall development of the students and society. This department can take pride in fulfilling its primary objective of pioneering the women empowerment through education which was the dream and vision of its foundress Dr. (Sr.) Bertille CSST. The success achieved by the department is due to the dedication and well – coordinated efforts of the management, teaching and non-teaching staff. The

department has seen pass through its portals a long line of students many of whom have gone on to achieve dizzy heights in their chosen profession. And the department which is endowed with a life and personality of its own, is also proud of its students. At this juncture, we remember with gratitude all **services rendered by our former HOD's**, teaching and non-teaching staff, PTA and alumnae of our department. We are sure that the department will grow in pursuit of higher standards of teaching and research and will continue to serve a significant role in the higher education for girls and in the service of society.



Dr. Sr. Vinitha CSST

MESSAGE FROM DIRECTOR

I am glad to know that Post graduate Department of chemistry is celebrating its Golden Jubilee during 2016-2017. On this happy occasion I convey my greetings to all the past and present teaching and non-teaching staff of the department, students and to all associated with the department. I hope that the department will continue to play its part in the educational sphere and will direct its efforts towards the all round development of our students. The goal of education is overall development of the individual and we all have to ensure that there is no stone left unturned to equip the student of today for the challenges of life. The faculty of Chemistry department has always been a trend setter. I wish to congratulate the entire faculty and other staff for encouraging and guiding the students in all facets, for their all rounded development. I wish you all the best for achieving greater success and scaling newer heights in your future endeavours. God bless you.

MESSAGE FROM PRINCIPAL

I am indeed happy to know that Post graduate department of chemistry is celebrating its golden jubilee during 2016-2017. On this significant occasion I thank and congratulate the committed and supportive management, dedicated teachers, caring and co-operative parents who blend harmoniously to create a student-centric department. "Success comes to those who work hard and stays with those, who don't rest on the laurels of the past." It is a time to look back with gratitude to the Lord for all the blessings department of chemistry has received and to look ahead with enthusiasm, trust and confidence. A Golden Jubilee is an occasion to take stock of ones achievements as also to set new goals for the future. I hope that the Department of Chemistry will continue to strive hard to achieve excellence in academics and co-curricular activities in the years to come. May God abundantly strengthen and support us in the years ahead. It unleashes a wide spectrum of creative skills ranging from writing to editing and even in designing the newsletter. I congratulate the entire editorial team for their hard work and dedication in making this dream come true.



Dr. Sajimol Augustine

MESSAGE FROM FORMER HEAD OF THE DEPARTMENT

The seed of chemistry that we sewed fifty years back into the fertile soil of St. Teresa's college has grown into a mighty tree. On this very happy occasion of the Golden Jubilee Celebration of the Post Graduate Department of Chemistry I feel proud of having been instrumental in the birth and growth of the department. I pray to the Almighty God that the department of Chemistry of St. Teresa's College grows to greater heights.

Prof. K. A. Annakkutty
Former HOD

MESSAGE FROM HEAD OF THE DEPARTMENT

The Postgraduate Department of Chemistry established established in 1966, has completed fifty glorious years in its pursuit of excellence. The department has moulded young girls of many generations into outstanding women, who have served the humanity in multifaceted ways. The department was emancipated from its graduate level to postgraduate level with the commencement of MSc Pure Chemistry course in 2013. We will be taking bigger strides in the field of chemistry and as well in interdisciplinary science, with the proposed research centre soon becoming a reality.

The department has always seen to it that the students entrusted to our care are inculcated with high moral and spiritual values as well as good ethics. For this we have provided ample opportunities to our students through curricular, extracurricular and co-curricular activities. We are proud to say that we have always maintained a beautiful relationship with the parents of our students through regular PTA meetings. The department was also fortunate to have received unstinted support and cooperation from the management for the successful implementation of all our activities. Our non-teaching staff have always stood with us and helped us in best the possible way to run the department in the most successful manner. Above all the guidance and blessings we have received from the Almighty has helped us reach this far and we firmly believe that the same Grace will lead us ahead in the years to come.

Dr. Geetha Andrews
HOD

Remembering with gratitude... & Eucharistia To our dear teachers.....



Late Dr. (Sr.) Bertille
Founder HOD, M.Sc,
Ph.D (1963-1991)



Prof. K. A. Annakkutty
M.Sc., M.Phil
(1964-1997)



Prof. Agnes Mathew,
M.Sc (1969-2002)



Prof. Thresiamma Sebastian,
M.Sc (1969-2001)



Prof. Kunjamma Varghese
M.Sc (1969-2003)



Prof. Nancy Joseph
M.Sc. (1969-2003)



Prof. Aleyamma Leni Oommen
M.Sc (1970-2003)



Prof. Celine V. A.
M.Sc (1972-2004)



Prof. Radha L.
M.Sc (1979-2004)



Prof. Anna K. J.
M.Sc (1986-1999)

Current Faculty



Dr. Geetha Andrews, HOD



Dr. Ushamani M.



Dr. Jaya T. Varkey



Dr. Saritha Chandran A.

Guest Faculty



Dr. Derry Holaday



Dr. Navya Antony



Smt. Mary Lincy K. J.



Dr. Anuja E.V.



Smt. Annu Raju



Ms. Mariya Thomas

Non-teaching Faculty



Late Mr. Jo Anto (2012-14)



Smt. Kochutresia



Mr. Alosious P.J



Mr. Jeslin George T.J.

A WORD FROM EDITOR

It is indeed a great pleasure to serve the Alma Mater in every possible way and I consider this assignment of the production of the Golden Jubilee Souvenir of the post graduate department of chemistry, as a privilege. I like to thank all contributors, teaching and nonteaching staff and students who helped us in the publication of this Souvenir. My special thanks also goes to Dr. Geetha Andrews (HOD), Dr. Ushamani M., Dr. Jaya T. Varkey and Dr. Saritha Chandran A., for their valuable advice on the preparation of this Souvenir. I also thank the students Dhanya Roy, Sahala Nayeem and Riya Martin for taking pains in collecting photographs and student activity reports. We hope this edition of the Souvenir will be as cherished and enjoyed by everyone as much as we enjoyed compiling it. Wishing you a happy reading time.



Dr. Navya Antony



The golden jubilee celebrations for the year 2016-2017 had a **scintillating start** by invoking blessings of Almighty with a holy mass on July 1st. Rev. Fr. Antony Raju, priest in-charge Jeeva matha church, mattanchery and the Jesus youth coordinator of Cochin diocese offered the thanks giving mass. All catholic students and teachers of science block, retd. teaching and non-teaching staff attended the mass .

Inauguration of golden jubilee celebrations of Post graduate department of chemistry was conducted on 04/07/16. Dr. Sabu Thomas, Prof. School of chemical sciences and Hon'ble director center for nano science and nano technology, M.G University, Kottayam was the chief guest of the day. The programme was held at seminar hall arts block. Retd. teachers ,students of IDC, IIDC, III DC ,IIPG, Teaching and non teaching staff attended the function. Dr. Saritha Chandran was the co-ordinator of the programme. Dr. Sr. Vinitha ,Director of the college gave the presidential address. Prof. Annakutty delivered felicitation.



A talk on
‘Engineering at the nanoscale
–a strategy for developing
high performance functional
materials’ was delivered
by Dr. Sabu Thomas.



INTERNATIONAL SEMINAR-RASE-2016

Post Graduate Dept. of Chemistry organized an **International seminar** on “Recent Advances in Solar Energy Applications”-RASE-2016 on 15th December 2016 under the leadership of Dr.Ushamani M., Faculty of the department. Dr. Suresh C. Pillai, Scientist, Nanotechnology and Bio- Engineering Research Group- Institute of technology Sligo, Ireland and Center for Precision Engineering, Materials and Manufacturing Research (PEM), Institute of Technology ,Sligo, Ireland inaugurated the function. The Director Rev.Dr.Sr.Vinitha, CSST and Principal Dr.Sajimol Augustine M. felicitated the gathering.

There were 9 paper presentations in Young scientist award category for research scholars and 14 presentations in Innovative student project award category for postgraduate students from various universities and colleges. The seminar was concluded with a valedictory talk by Dr. Rethesh Krishnan on the topic“Tuning photochemical reactions for materials design”. The winners were awarded with cash prizes and participants were given certificates at the end of the seminar. Total 150 participants registered for the seminar from which 85 were from other universities and colleges.



Dr. Rethesh Krishnan, Assistant Professor, dept. of Chemistry, Govt. College for women, Trivandrum and Dr. Jorphin Joseph, Dept. of chemistry Sacred Heart College, Thevara were the judges for the competition.



A two day National Seminar on “**Advancements in Polymer Science and Technology**” sponsored by UGC was organized by the Department of chemistry on 24th and 25th January 2017 at the D’Lima Conference Hall. Dr.Saritha Chandran was the convenor of the seminar.

Dr. S. Radhakrishnan, FMASc, FIPI, FSAEST, Director, Research Development & Innovation, Maharashtra Institute of Technology, Pune inaugurated the seminar and presented the keynote address. He also gave a knowledgeable lecture on **New Polymers, Blends and Composites with Novel Applications**. In connection with the Seminar, a paper presentation (oral and poster) competition for original Research work of research scholars and PG students was organized.

The poster presentations were judged by Dr. Shailaja, Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Dr.Shiny Palaty, Associate Professor, Dept. of Chemistry, Bharatha Mata College, Trikkakara and Dr. Susamma Jose, Retired Principal, Government College, Tripunitura.

A total of 36 papers were presented. The following scientists gave lectures for the Seminar

Lecture 1: **Dr. K. N. Ninan**, Former Outstanding Scientist and Deputy Director, VSSC & Professor Emeritus, Indian Institute of Space Science and Technology, lectured on Polymers in Indian Space Endeavors.

Lecture 2: **Dr. Jia Jose**, International and Inter University Center for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, India, lectured on Polymer scaffolds Engineered with nano-inclusions for wound healing: Current Status and Future Perspective.

Lecture 3: **Dr. Anoop Anand**, Scientist, DRDO, Pune, lectured on Composites Structures in Defense

Lecture 4: **Dr. Sunil K. Narayanankutty**, Professor and Head, Dept. of Polymer Science and Rubber Technology & Dean, Faculty of Technology, Cochin University of Science and Technology lectured on Development of FMWCNT/ Polyaniline/ TPU composites for strain sensing applications.

Lecture 5: **Dr. Varkey Mathew**, Principal, Holy Cross College of Management and Technology, Idukki lectured on Production, Properties and Applications of



LIVING BRAVE-2016

Living Brave- 2016’ -All Kerala self defence training programme for women in association with Kerala Police-Vanitha Cell, Kochi City Under the support of UGC-CPE Grant for seminars was inaugurated by City police commissioner Shri M.P.Dinesh IPS, on 17th August 2016 at Platinum Jubilee Auditorium, St Teresa’s College Ernakulam. The coordinator of the programme was Dr.



The students of II DC and III DC conducted the annual fresher's day on 23 June 2016. The program commenced with official inauguration of the activities of chemistry association 2016-2017. The chief guest of the day was Prof. Jose Prakash, retired professor of St. Albert's college, Ernakulam. He enlightened the class with wide range of opportunities in the field of chemistry. Dr. Geetha Andrews, HOD presided over meeting. The most awaited event was 'Miss Fresher' 2016-17. Geetha ma'am crowned Ms. Sahala Nayeem as 'Miss fresher' 2016-17.

The 23rd of September was marked as a memorable day in the life of every fresher of M.Sc. Chemistry, St. Teresa's College. The Fresher's day was a day that was filled with excitement, joy, music, enthusiasm, laughter and happiness. Excited students were ardently welcomed by the seniors to the chemistry family. Dr. Geetha Andrews, Head of the Department of Chemistry felicitated the gathering. All the freshers including the senior's rocked the show and enjoyed the celebrations and all thanked the HOD, staff and seniors students for hosting such a nice program that they could cherish lifelong.



Kabhi Alvida na kehna

The farewell celebration for the graduating batch of BSc Chemistry of 2016-17 was held on February 17, Friday. It was organized by the first and second year students. The theme for the day was "Kabhi Alvida na kehna" (Never say goodbye). Students of Post graduate department of Chemistry gathered to bid farewell to the outgoing final year M.Sc. students. The day was a fiesta devoted to the two years spent together with friends and teachers to reminisce joyous moments. The event named "Tot Ziens" which means 'Good bye until we meet again'.

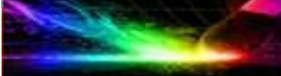


FIELD TRIPS

- * On 21st of January, 2017 the First year P.G. students of our college attended the memorable exhibition Sastrayan-2017'. Exhibition had all 27 departments of CUSAT showcasing their major research activities. A memorable event for the first year P.G. students was the visit to CSIR - (NIIST), at Thiruvananthapuram on the 27th of September, 2016.
- * III DC Students went for industrial visit at Doddabetta Tea Factory and Tea Museum, Udahgamandalam on 2^{1st} December 2016.
- * 26 students from Dept. of chemistry visited southern naval command at Naval base, Cochin as part of the departmental activity on 23-june-2015 and visited the Navy Hydrographic survey ship 'JAMUNA'.
- * I DC students visited CMFRI as a part of EVS project work.



Oceanous 2k16



Christmas Celebrations

“Christmas is most truly Christmas when we celebrate it by giving the light of love to those who need it most.” With this spirit in mind under **BEYOND SELF**- the social service outfit of the department of chemistry students of IDC and IICD decided to celebrate Christmas on 22nd December with needy and poor in different orphanages. The dept. of chemistry won 1st prize in the ‘basket of love’ competition conducted by homescience dept. of St Teresa’s college as a part of Christmas programmes. I DC chemistry students co-ordinated the programme for the chemistry department. The basket was gorgeous and encompass stationary items, grocery items, cakes, biscuits, cereals, grains, rice, wheat etc. The I DC students visited ‘DONBOSCO’ Orphanage for girls and II DC chemistry students visited Mercy Home-old age home for senior citizens run by Carmelite sisters of St Teresa’s convent, Ernakulam. The Students organized various programmes for inmates and they had a fabulous Christmas celebration to cherish in their memories.



Onam Celebrations

This time too, union members has come up with a slew of programmes to woo teresians with an eclectic and impressive array of cultural activities to make Onam memorable. On 8th September all students came dressed up in cultural outfits like kerala saree and the entire outlook reflects in every one’s face a time of extreme happiness. The students of chemistry department also participated in flower carpets competition, Onam song competitions, Malayali manka contest etc. and IInd years bagged first prize in onam song competition and Ist years bagged IInd prize in pookalam contest. The cultural extravaganza of music, dance, and other cultural activities reeled everyone in festive splendour.



Ramadan Mubarak

Students of III DC Chemistry celebrated the month of Ramadan by arranging Iftar party with extensive range of sweet dishes and desserts. The students shared the sweets they prepared and wished their friends and teachers the joy, health and happiness as always. The Head of the Department Dr.Geetha Andrews along with the faculty members joined the students in the



Teacher’s day celebrations

The second year students of the department celebrated the Teacher’s Day on September 5th .All the teachers were invited for the small function organised in the classroom. Students expressed their love and respect to the teachers by presenting greeting cards prepared by the students. Dr.Geetha Andrews, The Head of the department sliced the cake and thanked students for their love and support for the teachers.



MERCYMEAL.....AN ACT OF LOVE

Sharon Maria and Maria Jesleena of III DC were appreciated by everyone for their initiative to collect and distribute ‘pothichoru’ that students of chemistry department bought from their home once a week to the needy at general hospital.





Kalaripayattu demo was performed by Kalarigurukkal Smt. Merina, Fort Kochi on 17/08/16 as a part of self defence programme for girls.

The empowered woman is powerful beyond measure and beautiful beyond description.



CAREER GUIDANCE PROGRAMMES

- * **NEXT STEP-** The UGC - CPE supported Academic Orientation programme for IIIDC and PG students was held on 18th November, 2016. The resource person for the first session was **Dr. P. Ananthapadmanabhan**, Associate professor, Dept of Chemistry, Maharaja's College, Ernakulam. The Topic was 'Basic Concepts in Chemistry for CSIR Aspirants'.
- * **Smt. Anitta Antony**, CSIR research Scholar, Department of Chemistry, St. Albert's College(Autonomous), Ernakulam was the resource person for the second session. **The Topic was 'Strategic Planning for CSIR exams'**.
- * A Career guidance seminar by **Dr. Venkataraman** on 20-02-2015.



TROP - Teresian Rural Outreach Programme

- * Inauguration of the programmes of **TROP** of Department of Chemistry was carried out by Shri. M. P. Dinesh IPS (Hon'ble Commissioner of Police, Cochin City) on 17th August 2016. Dr. Geetha Andrews, Head of the Department of Chemistry carried out the official beginning of the programme by handing over the lighted candle to the TROP Co-ordinator Dr. Derry Holaday M.G.
- * One day seminar for the students of 8th, 9th and 10th of various schools on 10/12/2016 on the topic 'Introduction to the world of chemistry'. The talk was carried out by Ms. Snehamol K. J., 1st year M.Sc. chemistry student from the Dept. of Chemistry. 60 students from various classes participated in the seminar.
- * Students of Maria Goretti Public school were given a workshop on lab experiments on 08/02/2016.
- * Classes on Environmental awareness and importance of organic farming were also given during 2015-16.
- * Programmes were conducted as a part of Navathy celebrations





The chemistry association always promotes the overall development of the chemistry students along with the hope of developing a passion for the subject through the activities like, seminars, discussion, quiz, interaction with the eminent personalities, visit to industrial places etc. The association gives a platform for the students to get involved in the activities which will instill deep interest in the subject through the involvement in various interactive sessions and above all makes them understand importance of the team work and co-operation for the fruitful run of all activities. For the



last 5 years events organized by association includes lectures, workshops, career guidance classes, training programmes etc.. Some of them are listed below:

- * Sri. K.J. Jerly, the author of the book "The nano world"- gave a lecture on 'Variation and perturbation methods in Quantum Mechanics' (30-01-2015).
- * Conducted 'coconut fiesta 2015' and Poster designing competition on the theme **Nalikerma mahatmyam** on **16-08-2015** to commemorate 'World coconut day' on September 2nd 2016.
- * **Gender sensitization programme**-A talk by Mr. Francis Perrera, Rtd. Inspector of Police Cyber Cell, Kochi- **Cyber Crime Awareness Programme** (10-09-2015).
- * Values for good life –a talk by Adv. Kamala Menon, High court of kerala on **7-08-2014**
- * Cohosted Interdepartmental Science exhibition as part of **Navathi celebrations** on 13th and 14th August 2014.
- * Star making competition on 18-12-2014.
- * A **Career guidance seminar** by Venkataraman on 20-02-2015.
- * Mr. K.J. Jerly, Dept of chemistry, Cochin college and Dr M.George Associate Professor, Dept. of chemistry, S.H. Thevara, Lecture series on **Quantum mechanics and computational chemistry** as a part of Navathi celebrations 2014-15. (18-21 June 2014)
- * Dr.A. Ajayaghosh, Scientist National Institute of Interdisciplinary science and technology, Trivandrum, -**Supramolecular chemistry** on (7-02-2014)
- * Dr. Reshmi Poojara, Dept. of Home science, St Teresa's college, -A Talk on 'You are what you eat' on 16-12-2014
- * Inauguration of Chemistry Association activities for the year 2013-14 on 17/7/13 by Dr. Mohammed Hatha, Associate Professor, CUSAT which was followed by a talk on **Arctic Expedition**
- * Dubbing classes by Smt. Asha devi, radio artist was organized for students on 19-07-2013
- * Hands on training on jewellery making for I,II & III DC students on 16-01-2013.
- * **World environmental day** celebrated on 18-06-2013
- * Smt. Anitta Antony, Dept of chemistry, St Teresa's college, -Scaling the NET, Interdepartmental orientation programme for UG and PG students. (03-12-2013)
- * Dr. Lovely Mathew, Associate Professor, Dept. of Chemistry, Newman College, Thodupuzha- **Molecular and Crystal Symmetry as a part of Sr.Bertille Memorial endowment lecture series** (13-12-2013)
- * Dr.Franklin John, Dept. of Chemistry, S.H College Thevara, -**Chemistry and biology of carbohydrates**, 16-07-2012.



FACULTY ENRICHMENT PROGRAMMES



- * Dr. Abi T.G., Assistant Professor, Dept. of chemistry Sacred Heart College Thevara gave lecture on Recent Advances in Computational Chemistry on 14/3/17.
- * Smt. Jayasudha Mohan, Mr. Jafee James, Mr. Justin John gave a lectures in a one day workshop on MS office for ICT enabled teaching on 21/03/17.



Navadarshan programme for blooming buds of science



Department of Chemistry is one of the participating departments for the Junior scientists programme of Navadarshan 2016-17, of the Arch Diocese of Verapoly in collaboration with St. Teresa's college. Faculty members and students of PG and UG are the resource persons. The 8th standard students from various schools were selected based on entrance test and interview. The students were then given theory and practical classes based on chemistry



Newsletter-Rasathanthra



Student magazines



DR.SARITHA CHANDRAN
TEACHER IN CHARGE

Student assignments



Student publication

Ms. Sheryl Cherian Parackkal of III BSc self published an E-book "Sheryl's Poetic Fantasies" on Amazon.com on 15 January 2014.



Milestones & Faculty Achievements



M.Sc. Pure chemistry course started in the year 2013-14



Books published by the faculty



- * Dr. Geetha Andrews HOD, completed 25 years of service
- * Dr. Jaya T. Varkey was awarded UGC Research Award (2016-2018)
- * Dr. Derry Holaday M.G. (guest faculty) was awarded Ph.D. in Photochemistry from NIIST CSIR, Trivandrum
- * Research Guideship :
- * Dr . Jaya T. Varkey and Dr. Ushamani M.



Inter departmental MSc project (in collaboration with Physics department)
 Department of Zoology, NSS College, Changanassery, (Intercollegiate collaboration by **Dr Ushamani .M**),
 School of chemical sciences, M.G. University, Kottayam (Research collaboration by **Dr. Jaya T. Varkey**)
 Korean Ocean Research and Development Institute.
 NCAOR, Goa.
 Dept of Marine Biotechnology, CUSAT (**Dr. Anu Gopinath**)
 Kerala University of fisheries and ocean studies, Panangad (KUFOS)
 NISER, Bhubaneswar
 ICT- CSIR, Hyderabad (Research collaboration by **Dr. Derry Holaday**)

Dr. Anu Gopinath– (PI)-DST fast Track Scheme-23.7 lakhs-2012-16.
 UGC major project-Co-PI 12 lakhs-2014-16
Dr. Ushamani M. UGC minor project-85,000/—2012-14.
Dr. Jaya T. Varkey-KSCSTE PROJECTS
 i) Grant-10,000/-2012-13 ii) Grant-13,000/-2014-15 iii) Grant-6000/--2015-16 iv) Grant-7000/-2016-17 v) Grant-4.4 lakhs (returned because of availing UGC research during same period)
Dr. Saritha Chandran– UGC National seminar sanctioned with grant Rs. 1.25 lakhs

Dr. Anu Gopinath -selected for **Arctic Expedition 2014-2015**, by National Centre for Antarctic Ocean Research, Goa – Focussing on Dissolved Organic Compounds in Kongsfjorden, an Arctic Fjord – 2014
ISAS award for contributions in teaching and research, 2014 Sep 18th .
Commonwealth Academic Staff Fellowship, 2012, National Oceanography Centre, Southampton, UK.
DST Fast Track Scheme for Young Scientists -2012.



Our faculty members have a total of 25 publications in international journals and proceedings during the period 2012-17.

Our faculty members are in editorial board and advisory board of national and international journals.

Dr. Ushamani M. attended one week workshop on ICT from 07-13th 2017 March organized UGC Human Resource Development Center, University of Mysore, Manasagangotri, Mysore .

Faculty members have a total of 13 international paper presentations and 18 national level paper presentations during the period 2012-17.

Faculty members have total 3 international books and 10 national book publications and 1 book chapter in international journal.

Student Progression

95 of our students secured admission for PG in chemistry, 3 for M.phil, 2 of them got admitted to institutions abroad 7 of them got admitted to institutions of national importance, several of them qualified various competitive exams like NET, GATE etc. 30 of them got campus placement in companies such as WIPRO, Infosys, TCS, Sutherland, Concentrix and Cognizant, Soft shore technologies, IBM, Campus Recruitment Drive of Royal Bank of Scotland group, Spices board, Synthite etc.

Students admitted to Institutes of national and international level

- * Nimya Ann Mathews –M.phil. Applied chemistry, CUSAT 2016 (She topped entrance test.). Blessy A.X. -M.Phil Oceanography CUSAT (2016).
- * Blessy A.X. -M.Phil Oceanography CUSAT (2016).
- * Nimisha Mohandas- student of III BSc. Chemistry (2015-2016) got admitted to University of Manchester, U.K.
- * Pooja Babu- Diploma course in chemical lab technology a 3 year course (2015) Fanshawe college, Canada Ontario.
- * Camey Monica- CUSAT for M.Sc. Hydrochemistry (2015)
- * Devika S IISER for M.Sc. Chemistry (2015). She is one of the two candidates selected from Kerala, or higher studies in IISER all over India.
- * **Annu John- Dept. of Marine sciences, CUSAT (2014)**
- * **Veena V, Geethu C. Thomas— Center for Biopolymer Science Dept. of Biotechnology for M.Sc. Biopolymer science (2014)**
- * **Geethu C. Thomas- Centre for Biopolymer Science Dept. of Biotechnology for M.Sc. Biopolymer science. (2014).**

Student achievements



National and State level exams:

- * Nimya Ann Mathews qualified GATE EXAM, 2015.
- * Linsha Tholat of II MSc.Chemistry qualified SET exam in 2016

Student Research initiatives

2016-2017

- * **8 IIPG students published abstracts of their research work for MSc project in the International seminar proceedings RASE 2016 organized by Post graduate dept. of Chemistry ,St.Teresa's college (Autonomous).**
- * Ms. Syno Paul, Ms. Athira S. Kumar from III DC Chemistry were a part of the team who won first prize in poster presentation competition in UG level as a part of UGC Sponsored national seminar on 'Advancements in Polymer Science and Technology'. The work presented was based on the UG project done under the guidance of Dr. Ushamani.
- * **14 PG and 2 UG students have published papers of their research work in the proceedings of national seminar on Advancements in polymer science and technology ,2017, organized by dept. of chemistry, St Teresa's college, Ernakulam.**
- * **We have 9 paper publications, 8 abstracts of our PG students and 2 publications of UG students in various international and national seminars.**
- * **Aiswarya II DC Chemistry Presented a paper in the National conference and 33rd Convention of Indian Association of Sedimentologists with emphasis on energy resources and climate change organized by Dept. of Geology, Center of Advanced Study , institute of science, Banaras Hindu University at Varanasi ,Gujarat ,during November 12-14,2016.**
- * **Ms. Sicily Rilu Joseph II PG Chemistry Presented a paper entitled biodegradable polymer in heterogenous catalysis and their antimicrobial activities –a green chemical approach in 26th swadeshi science congress organized by swadwshi science movement,kerala during 7-9 november 2016 at central marine fisheries Institute Kochi.**
- * **Ms Reshma K.S. participated in 26th swadeshi science congress organized by swadeshi science movement,kerala during 7-9 november 2016 at central marine fisheries Institute Kochi.**
- * **Ms. Reshma K.S. (II PG Chemistry) secured Ist Position among category 2 college level Malayalam essay competition in the All India Essay writing event 2016 in Kerala Zone 3A region.**
- * **Ms. Sicily Rilu Joseph II PG Chemistry has participated in the Start-up Exhibition held on 15th and 16th December,2016 at Mahatma Gandhi University.**

2015-2016

Riya Martin IDC

- * Attended Workshop December 14-18, 2015,Indian Institute of Science Education and Research Thiruvananthapuram (IISER)
- * Completed Science Talent Enrichment Programme Workshop May 23-27,2016, Indian Institute of Space Science and technology
- * Participated in Science & Technology Enrichment programme (STEPS) organized by IIST under the Student programme for excellence in experimental design (SPEED) of KSCSTE
- * Participated in the Orientation programme on "Programme for motivating Innovation in Science (PROMISE) "organized by National Institute for Interdisciplinary Science and Technology on 25th april-29th april ,CSIR ,TVM.
- * **Ms. Renjitha R (II MSc Student) won first prize in paper presentation competition for MSc project work In the UGC Sponsored National Seminar (K.V. Thomas endowment lecture) held at S.H. College, Thevara , from 7-8th Dec 2015.**
- * Two teams from III DC students 1) **Snehamol K.J. and Athulya Merlyn** 2) **Jesni joy and Majida Syed won first and second prizes respectively in** project presentation competition held at S.H.College Thevara, on 26/02/2016 conducted in association with "National Science day – BODHI 2016" Organized by chemistry department.
- * **Ms. Renjitha R (II MSc Student) won first prize in paper presentation competition for MSc project work in the UGC Sponsored National Seminar (K.V. Thomas endowment lecture) held at S.H. College, Thevara , from 7-8th Dec 2015.**



- * Sergeant Linu Vincent of III DC attended N.C.C. officers training at Officer's Training Academy, Chennai as one among the three representative from Kerala from 17th August to 28th August 2015. Also attended screening camp at OTA Gwalior as one among the representatives from Kerala. **She has been awarded the best NCC cadet of the college, for the year 15-16 2013-2014**
- * Pooja N. V., Pooja Babu Presented a paper in the seminar on **Women in the Socio-Cultural And Administrative Mainstream of Kerala** organized by the KSWDC Women's Cell of St. Teresa's College on 21 January 2014.
- * Anu Susan Cherian became the university top scorer with A⁺ in MG University CBCSS Programme –(2012.) .
- * **Our students receive INSPIRE scholarship, Prathiba scholarship, DST-INSPIRE Fellowship, Summer fellowship, Higher education scholarship, JNB, etc. Francis Arthasserry memorial Scholarship is instituted by our Alumni Dr. Phyllis Arthasserry for two outstanding undergraduate students of the department.**

Youth Festival Winners

- * Reshma K.S. I MSc. Eastern group song of M.G. University youth festival First prize(2015-16)
- * Rajeswari M.P III DC Thiruvathira team -1st prize at M.G. University youth festival 2012-13 (participated and won prize for the last three consecutive years).
- * Mrudul Vijay Supekar III DC group dance team -IIInd prize at M.G. University youth festival 2012-13 (participated and won prize for the last three consecutive years).
- * Sruthymol P.P. III DC oppana team -IIIrd prize at M.G. University youth festival 2012-13.
- * Dona M.M. I DC Margam kali M.G. University Youth Festival
- * Nayana John-Group dance-IIInd prize 2017



Results

- * **In 2013, Chemistry Department of St Teresa's College was the only department under MG University that got 100% pass in the final year CBCSS Chemistry Exam**
- * **The department has produced the university top scorer with A+ in MG University CBCSS Programme –(2012.)**
- * **The department has 12 A+ winners and 9 A grade winners in M.G. University for final year exams of BSc. 2015-2016. For PG there was 92.8% total pass which includes one A+ and 3 A grade winners.**

Sports

- * **Ms. Christeena Louis** of IIDC Chemistry represented M.G University in the all **India Interuniversity Cycling Championship** held at Punjab from 24th-27th november. She was selected as **Individual champion of M.G University Cycling Championship.**
- * She secured first prize in the intercollegiate cycling meet, Kanjirapally on 31st October.
- * She has been awarded special prize for the outstanding achievements in sports for the year 2015-16.
- * **Ms. Liya Rose**-of IIDC Chemistry secured first prize in M.G University intercollegiate base ball competition held at Kottayam.
- * She secured second prize in M.G University Intercollegiate Kabaddi, held at BCM College, Kottayam

Infrastructure Details.....

- * Two Class rooms which can be combined and converted to a spacious seminar hall.
- * Well equipped UG labs.
- * State of the art M.Sc. Labs -2.
- * Computer lab with internet and printer.
- * OHP
- * PG Instrumentation room .
- * Department Library.
- * Reference library for faculty and students
- * Three smart class rooms.
- * Project lab which can be converted to research lab.

ARTICLES AND PAINTINGS

EMPOWERING WOMEN.....!!



A successful
woman
is one who can build
a firm foundation
with the bricks
others have thrown
at her.

A women in today's society can fight for injustice only if she has some knowledge about what is actually happening around her. Here comes the importance of "EDUCATING A WOMAN". Since it is wisely said that "educating a women is educating tommorrow".

Education of woman increases her status and stature not only in her family, but in her society. She can get an economic support and can remain independent sticking to her own values. She will have a voice in her family. Moreover she can explore the world in a better way. Thus the prominent step that one could do to help a girl child is by educating her. Secondly, awaring the society is mandatory. The idea of parents who strongly believe in their old convictions that a girl child is a burden in their family has to be ripped off. From the school level , the need of honouring a woman should be taught to both young boys and girls.

So girls, rise up and fight!.Don't ever think that just because you are born as a "girl", you are a burden!.Every girl should know the concept of what is actually "THE ESSENCE OF BEING A WOMAN":it is what sharing ,caring and loving is all about. Stay morally upright when the immoral deeds are happening around you!!.Be diligent , educated shining stars for your better tommorrow. Hope for the best and be prepared for the worst.....

regards

SONA KURIAN
II DC Chemistry.

GREEN CHEMISTRY

In the context of increasing pollution and resource depletion, research activities were progressively focused on the synthesis of environmentally benign alternatives to hazardous chemicals in 1990s, thus, marking the birth of Green Chemistry. Green chemistry focuses on technological approaches that can be adopted to prevent pollution and reducing consumption of non-renewable resources. The emergence of Green Chemistry can be attributed to the costs of waste generated in industries, and the need for cleaner chemical manufacturing techniques.

Priority is given not only to quantify the *greenness* of a chemical process but also to factor in other variables such as chemical yield, the price of reactants and other reagents, safety in handling chemicals, hardware demands, energy profile and ease of product formation and purification. Volatile organic solvents that are both carcinogenic atmospherically hazardous are being replaced by non-volatile ionic liquids; and heterogeneous reagents and catalysts are being introduced to avoid the use of soluble reagents and other process additives that are hazardous or difficult to separate. This will not only be a major step towards the creation of a new generation of green and sustainable chemicals, but will also help solve the escalating waste problems faced by the mankind.

Although fossil fuels and mineral-derived resources will continue to be important in the upcoming years, chemicals and materials derived from non-food biomass and from the ever growing mountain of what we still refer to as 'waste' will eventually take over and thus, the 21st century will bear witness to a gradual transfer from a petroleum-based chemistry to a chemistry based on a wide diversity of feedstock. Green chemistry can lend a hand in converting these feedstocks into resources through low-environmental-impact technologies, processes and methodologies. In this way we will be able to achieve the essential goal of creating green and sustainable products for the next generation.

Dhanya Roy
I MSc. Chemistry



Maria Jesleena,IIIDC Chemistry



Haritha R Das, II DC Chemistry



Meenu T.S.,II DC Chemistry



I am very happy to know that the chemistry department of St. Teresa's college is celebrating the Golden Jubilee. Hearty Congratulations and Best Wishes for the celebrations. I am proud to be an Alumnus of this department of one of the best colleges in the Kerala. I remember all my teachers with gratitude and they were my role models in my career. I wish and pray for the success of all activities in connection with the celebrations.

K.A Alice Retd HOD ,Bharata Mata College



I had been a part of the Teresian family during 1996-2001, for pre-degree (PCB) and BSc (Chemistry). The passion for Chemistry was instilled upon us by teachers like Thresiamma Ms, Leni Ms, Celine Ms. and Geetha Ms. Our teachers, Agnes Ms, Nancy Ms, Kunjamma Ms and Radha Ms taught us the fact that practising Chemistry is not just academic, restricted to the lab; but a way of life. I am sure all 32 students of the 1998-2001 batch would have learnt not just the Chemistry of lab but also the Chemistry of living. In the occasion of the Golden Jubilee of the Department of

Jesny S., Asst Prof.
Department of chemistry
S. N. College, Cherthala

Chemistry, I pray that the department continue its success in moulding enterprising women chemists who turn out to be an asset for the society.



Tresa Sunitha George, Asst. Prof.
Dept. Of Chemistry
St. Pauls College, Kalamassery

College life is no doubt, the golden period of a student's life. The knowledge gained, the opportunities availed and the friendship made during college days go a long way in determining the future life and career of a young person. Like every individual I also remember about my alma mater with immense gratitude and reverence. Being an alumni of St. Teresa's College, I cherish each moment I spend over there. It is from my Chemistry teachers I got an inspiration to work in the field of teaching Chemistry. During that time most of the teachers were very much seniors, and they treated us just like their daughters. It is from them I learned the basic traits like punctuality, discipline, moral values that a teacher must uphold during her career. I as a teacher, I need not look for anyone else other than my college teachers as torch bearers of humanity. I take pride, being a TERESIAN.



Dr. P A Nelson M. Sc. Ph.D, Associate Professor, St. Alberts College Ernakulam

I am privileged to congratulate **Rev. Dr. Sr. Vinitha**, Director St Teresa's College, **Prof. Dr. Sajimol Augustine M** Principal, **Prof. Dr. Geetha Andrews**, Head of the Department of Chemistry, all the Faculty members, non teaching staff and students on the occasion of Golden Jubilee celebration year of the department. I am very confident in these 50 years Department had produced large numbers of Scholars in Chemistry, Doctors, Engineers, Professors, Teachers and many others. In the coming future, the excellent faculty members of the chemistry department can produce large numbers of similar professionals to our nation The Great India.



My congratulations to the Department of Chemistry of St. Teresa's College on its golden jubilee celebrations. The department had played a pivotal role in the life of all its students by providing a platform to excel in academic as well as in arts and also on building their moral values. I wish for never ending success for the department and all the best for its future endeavours.

Mini Joy, Mother of Jesni I PG



It has been great honour to know that the department of chemistry, celebrates the Golden Jubilee Year. I warmly appreciate the department and the institution for imparting quality education in all core disciplines of knowledge. Being a mother, a woman, I feel proud that my daughter is a Teresian. So I wish all the teachers and staff of the department, in developing shining stars who are confident, smart and intelligent. Also I convey my warm greetings to the department and wish them all that is best in their future endeavours.

Betty Johnson, (Mother of Snehamol-IPG)



Being pioneers of Chemistry at St. Teresa's College, we were apprehensive about the whole course when we walked down the boulevard of chemistry department for the first time. But, with the support and care from our lovely teachers we were able to complete our course successfully. The memories of those years will be in our hearts forever.

Nimmya Ann Mathews (IPG BATCH 2013-15)

I believe,

“A teacher affects eternity; she can never tell where her influence stops”

Feeling proud and confident enough to say that your support has made me a driven individual. You have nurtured a lot of socially conscious, sensible and matured young women. We had an ever blessed time there, as we were brought up and taught up in the hands of five such amazing diamonds.

You - Care for us, Helped us to grow and learn, Listen us with concern, Sometimes kissed away our tears

“Your role is just as strong”

Congratulations and all the best wishes at this Golden Jubilee moments.....

.....joining you in grateful prayer for the past and for God's continuing blessings. **(Nayana Rajan 2009-2012 UGBatch)**

CONVOCA TION CEREMONY
PG BA TCH 2013-15



PG LAB



Editorial Board: Chief Editor : Dr. Navya Antony

Collection of photos and datas: Dhanya Roy, Snehamol, Shamly(IPG), Riya Martin, Sukanya(II DC), Sahala Nayeem(I DC)