

# **Department of Chemistry**

## VTMNSS College

## Dhanuvachapuram

**Year of Establishment** – 1967

### LIST OF TOPPERS IN UNIVERSITY EXAMINATION

Sl No	Name of the student	Year	University rank
1	Akshara P S	2024	
	Anusree C S		I
2	Vishakh M	2023	III
	Vineesh V J		V
3	Sreedevi L K	2022	IV
4	Greeshma R C	2021	
5	Ancy Mini V M	2020	
6	Abhirami B	2019	I
7	Amritha S S	2018	V
8	Divya M S	2017	
9	Gopika J S	2016	
10	Avijja A V	2015	V
11	Reshmi P	2014	
12	Jayachithra T	2013	III
13	Nisha M N	2012	
14	Christin raj S S	2011	II
15	Arun R V	2010	
16	Vaisakh S S	2009	
17	Anjana S S	2008	
18	Maya R S	2007	

19	Jayalatha T	2006	III
20	Aswathy B	2005	III
21	Sherin D R	2004	I
22	Shyny Raphel	2003	
23	Shiji T	2002	
24	Jayalekshmi A C	2001	II
25	Shibu prasad S	2000	

## **Annual Report 2024-25**

### Faculty, staff and student details

Sl. No.	Name	Designation
1	Mrs. Sreeja T G	Assistant Professor & Head
2	Dr. Suprabha S	Assistant Professor
3	Dr. Bindu P. Nair	Assistant Professor
4	Dr. Resmi V G	Assistant Professor
5	Dr.Lakshmi C S Nair	Guest faculty
6.	Ms.Sheeba Berling	Guest faculty

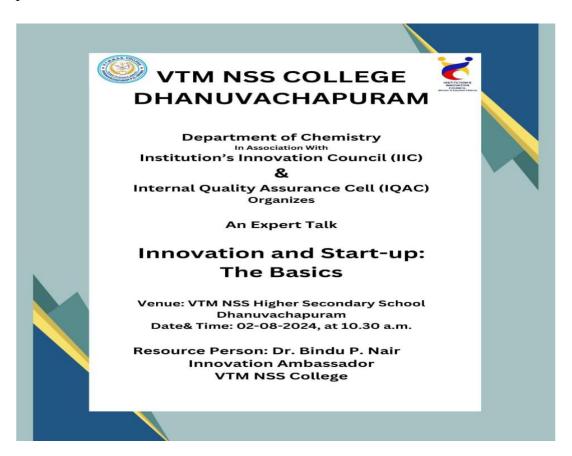
## **Department Level Committees**

### **Course Coordinators** (for core courses)

Sl No	Batch	Name
1	3 <sup>rd</sup> year CBCSS	Dr. Suprabha S
2	2 <sup>nd</sup> year CBCSS	Dr. Bindu P Nair
3	1 <sup>st</sup> year FYUGP	Dr. Resmi V G

### **Programmes conducted**

Department of Chemistry in association with IIC and IQAC conducted an expert talk on "INNOVATION AND START UP THE BASICS" on 02/08/2024 at 10.am at VTM NSS higher secondary school , Dhanuvachapuram..





#### 2. Manufacturing and marketing of soap

Department of Chemistry in association with IIC, IEDC and IQAC conducted a skill and entrepreneurship development programme named "Manufacture and marketing of soap infused with essential oil" on 13/08/2024 and 14/08/24 at our Chemistry laboratory. The resource person was Dr Bindu P Nair , Assistant professor of our department.





## Annual Report 2023 – 24

#### **Courses offered**

- 1. Core course– BSc Chemistry
- 2. Complementary courses—Chemistry courses to BSc Physics, Botany and Zoology
- 3. Open course Environmental Chemistry (Offered to S5 students from other departments).
- 4. Elective course Polymer Chemistry (*Offered to S6 students pursuing BSc Chemistry*)

Annual student intake – 32

Students admitted to first year during 2023 - 24 - 26

Total number of boys (all batches)-20

Total number of girls (all batches) – 65

Total number of differently abled students (all batches) – Nil

Total number of students from other states -0

Total number of students -31+28+26=85

Number of full-time teaching posts— 5 (*one post vacant*)

Students to full-time teacher ratio – 21

#### **Department Level Committees**

#### **Course Coordinators** (for core courses)

Sl No	Batch	Name
1	3 <sup>rd</sup> year (Sem 5 & 6)	Manju M J
2	2 <sup>nd</sup> year (Sem 3 & 4)	Dr. Suprabha S
3	1 <sup>st</sup> year (Sem 1 & 2)	Dr. Bindu P Nair

#### Faculty Advisors (for complementary courses)

Sl. No.	Batch	Name

1	I B Sc Physics (Sem 1 & 2)	Dr. Suprabha S
2	I B Sc Botany (Sem 1 & 2)	Dr. Suprabha S
3	I B Sc Zoology (Sem 1 & 2)	Dr. Bindu P Nair
4	II B Sc Physics (Sem 3 & 4)	Manju M J
5	II B Sc Botany (Sem 3 & 4)	Dr. Bindu P Nair
6	II B Sc Zoology (Sem 3 & 4)	Dr. Suprabha S

**Department Level Activities** 

#### **Department Newsletter – Chemphile**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish a newsletter summarizing our activities during each academic year. Head of the Department Ms.Sreeja T G is the staff editor of this year's department newsletter. Mr. Sarang and Ms.Akshara (S6 Chemistry students) are the student editors.

#### Go Green Campaign

Our department has started a green initiative in the name *Go Green* campaign from the academic year 2019-2020. It primarily aims at making the students aware about the need for keeping our environment clean and also to make effective steps in the scientific disposal of waste materials. In line with the objectives of the campaign, department level activities were conducted in strict adherence to green protocols so as to ensure minimal production of waste along with its proper disposal. Various initiatives under the campaign are coordinated by Dr.Suprabha S.

#### **Achievements**

#### Academic

#### **Student Progression to Higher Studies**

For the 2023 May pass-out batch, out of 37, 25 students completed the course successfully and **Anusree C S got first rank** in University and **Visakh M secured 3rd rank and Vineesh V J secured fifth rank.** 18 secured admission to higher studies. Details of students who secured admission for higher courses at various institutions are given below.

SI No	Name of student enrolling into higher education	Name of institution joined	Name of programme admitted to
1	Anusree C. S.	NIT-Calicut	M.Sc.
2	Visakh M.	University College, Thiruvananthapuram	M.Sc.
3	Vineesh V. J.	University College, Thiruvananthapuram	M.Sc.
4	Abhirami Asok S.	University College, Thiruvananthapuram	M.Sc.
5	GowriKrishna U. S.	S. N. College, Chempazhanthy	M.Sc.
6	Megha Nair R. S.	S. N. College, Chempazhanthy	M.Sc.
7	Pinky V. R.	S. N. College, Chempazhanthy	M.Sc.
8	Sidharth Chandran	Christian College, Kattakkada	M.Sc.
9	M. R. Aiswarya	Mar Ivanios College, Thiruvananthapuram	M.Sc.
10	Devika S. Nair	University of Kerala, Kariavattom	M.Sc.
11	Archana V. N.	University of Kerala, Kariavattom	M.Sc.
12	Krishnendu S. P.	D. B. College, Parumala	M.Sc.
13	Megha Sunil R.	Arts College	M.Sc.
14	Sreesha S.	M.G. University Centre, Kottayam	M.Sc.

15	Aarcha B. J.	S. N. College, Kollam	M.Sc.
16	Aswathy A. S.	Rajiv Gandhi Institute of Technology, Kottayam	MCA
17	Ardra R. Nath	Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram	P.G.Diploma in Medical Records
18	Gokul J.	Mahatma Gandhi College, Thiruvananthapuram	M.Sc.

### **Student achievements**

Anusree C S	Qualified JAM
Vineesh V J	Qualified JAM
Abhimanyu R S	participated in Group Song on
Gowri S P	Kerala university Kalolsavam held at University College Palayam Thiruvananthapuram on 09 march 2024
Abhimanyu R S	participated in Vanchippatt on
Abhin V S	Kerala University kalolsavam held at Govt. College Ambalappuzha
Gowri S P	Alappuzha on 2023 may 05 to may 09
Abhimanyu R S	participated in Group Song on
Gowri S P	College Arts held in February 23 & 24 2024
	and got first prize
Abhimanyu R S	participated in vanchippatt on
Gowri S P	College Arts held in March 23 & 25
Karthika S Nair	2023 and got first prize
Abhin V S	
Abhimanyu R S	Participated in group song on college arts held on February 23 and 25 2023 and won first prize
Lekshmi P L	participated in Bharathanatyam on





## Alumni

Sreedevi L K	Appointed as Technical Assistant, Kerala Drugs Control Department
Sivanandu S B	Appointed as Recruit / Nursing assistant, Address: No 2 Tech Trg wing,

	AMC Centre And College, Lucknow Cant Uttar Pradesh,Pin:226002
Akhil H S	Appointed as LD clerck

#### Student participation in various competitions

#### **College Youth Festival and Competitions**

- Feba S. Moorthy, Painting, clay, poster, cartoon, college, Group Song- First prize, vanchipattu -second Prize,
- 2. Saijith J.- Painting, cartoon second prize
- 3. Sibi B. S.- Malayalam Poetry Second, Margamkali First
- 4. Shifana J. S. Gazal, Mappilappattu First prize, Margamkali First
- 5. Athira V. T. -Kadhapresangam, monoact-First Prize, vanchipattu -second
- 6. Arya Vijayan V. M. Margamkali First
- 7. Manjima C. S. -Group song -1st, Vanchipattu -2nd prize

#### **Student achievements in sports**

#### Devadath A. K. S1 Chemistry

Kerala University Intercollegiate Softball competition-3rd position

Kerala University Intercollegiate Softbaseball competition -3rd position

Selected in Kerala University Soft Baseball Team

Selected in Trivandrum Senior Baseball Team

#### Jayaprasad J. R., S1 Chemistry

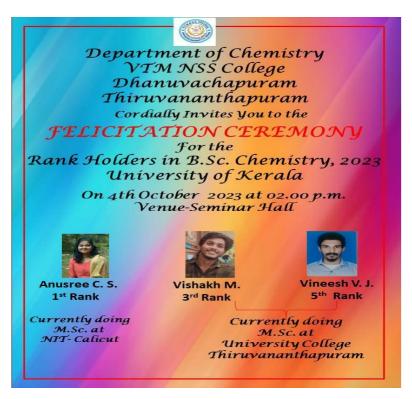
Kerala University Intercollegiate Softball competition -3rd position

Kerala university intercollegiate Softbaseball competition -3rd position

Selected in Trivandrum senior Softball Team

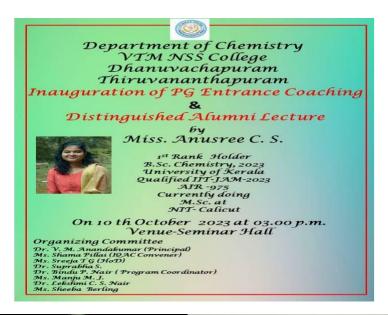
#### **Programmes Conducted During 2023-2024**

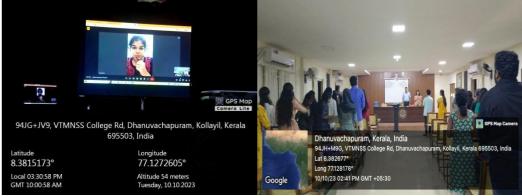
#### 1. Felicitation to Rank Holders





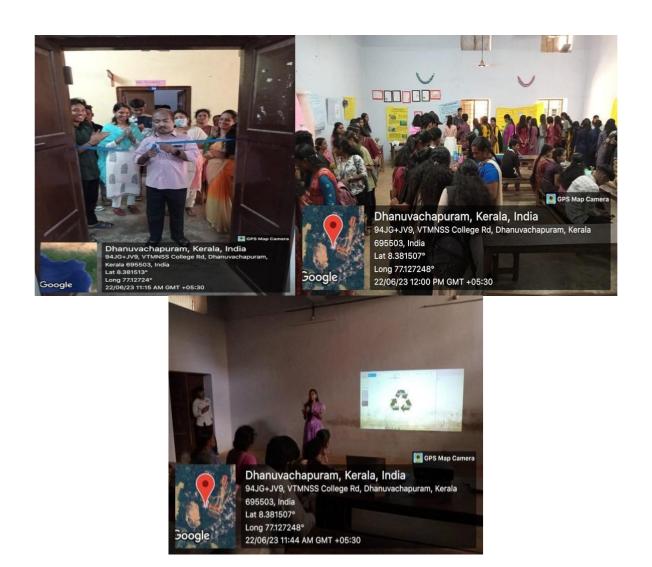
2. Alumni Talk(DAL)





#### 3. Exhibition- Beat Plastic Pollution





Objectives of the "Beat Plastic Pollution" exhibition are to raise awareness about the detrimental impact of plastic on the environment, promote sustainable alternatives, and encourage individuals and communities to take action. The exhibition aims to educate visitors about the consequences of plastic pollution on ecosystems, wildlife, and human health. It seeks to showcase innovative solutions and technologies that reduce plastic waste and promote recycling. Through interactive displays, workshops, and presentations, the exhibition aims to inspire behavior change, encourage responsible consumption, and foster a sense of collective responsibility towards mitigating plastic pollution. Ultimately, the objective is to create a more sustainable future by minimizing plastic waste and promoting a circular economy. The "Beat Plastic Pollution" exhibition yielded significant outcomes in the fight against plastic pollution. Firstly, it increased public awareness about the environmental impact of plastic waste, leading to a heightened sense of urgency and concern among visitors. The exhibition provided factual information, highlighting the severity of the issue and its consequences on ecosystems, wildlife, and human health.

#### 4. Reading Day Celebration

The National Reading day commemorates the death anniversary of PN Panicker, widely recognized as the 'Father of the Library Movement' in the state of Kerala. The day is observed on 19th June every year.

Department of Chemistry, VTMNSS College Dhanuvachapuram also conducted a Reading Competition in connection with this event. Competition was held at Chemistry Department on 19/06/2023. A total of 27 students registered and participated in the programme. The competition was conducted in two stages. Four students were selected from the first stage and the winners of the first round are, Gayathri J S, Divya G, Sharanya S and Sneha J S. Gayathri J S won First prize and Saranya S and Sneha J S shared the second position in the final stage.



#### 5. Onam Celebration





Chemistry Department also became the part of Onam celebrations in the college on 31.08.2022. Celebrated Onam on the department's premises amidst much fanfare involving staff and students. The celebrations started with setting up of an attractive floral decoration (pookalam) in the class room that was reminiscent of the agrarian past of Kerala, a South Indian state. Impressive designs and artistic creativity were the hallmarks of the Pookalam, which turned out to be attractive and mesmerizing and took everyone into a world of festivity and fun. The main attractions of the programme were onappattu, skits, speech, group songs, and solo songs. The arrival of Mahabali amid the beats of panchavadyam was well-received by the audience. Another attraction of the day was the traditional 'onasadya' that comprised more than 15 dishes served on banana leaves and included varieties of vegetables, rice, banana and payasam. Dr Ramesh Kumar, Principal, addressed the gathering and conveyed greetings and wishes of the festival.

#### 6. Freshers Day



#### 7. Christmas Celebration





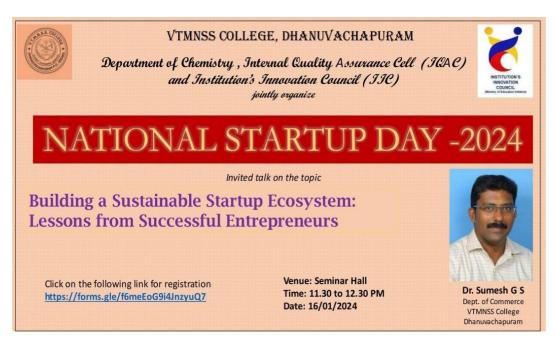
#### 8. Field Visit to Biomedical technology wing, SCTIMST poojappura





39 students and 2 faculty members of Department of Chemistry visited Bio-Medical Technology Wing of Sree Chitra Tirunal Institute of Medical Sciences and Technology (Department of Science and Technology)-Poojappura on 18-11-2023. The students and the faculty members reached the BMT Wing around 10 a.m. The students were divided into two groups and guided through different research labs of BMT-Wing. Scientists and technical staff of BMT Wing explained the importance of bio-medical technology and their approach in solving the problems in the bio-medical field. They were explained the inventions made in BMT Wing such as Chitra heart valve, Mirena IUD etc. The students visited the Animal House of BMT Wing where in vivo evaluation of their inventions are conducted. The visit concluded at 2 p.m. The participants were asked to identify a problem in the Bio-medical field and suggest a solution to it. Students came up with innovative ideas for various problems they have identified. Miss. Brintha S. S. of Semester 2 B. Sc. Chemistry won the first prize.

#### 9. Start-up Day Celebration







National Startup Day 2024 aims to celebrate, promote, and support the spirit of entrepreneurship and innovation within a country. This annual event serves as a platform to showcase the achievements of startups, foster a culture of entrepreneurship, and provide valuable resources to aspiring entrepreneurs.

As part of National Startup Day celebrations, the Department of Chemistry in association with IQAC and IIC organized an invited talk on the topic – Building a Sustainable Startup Ecosystem: Lessons from Successful Entrepreneurs on 16/01/2024 from 11.30 to 12.30 PM. The talk was delivered by honourable speaker Dr.Sumesh G S ,Department of Commerce, VTMNSS College, Dhanuvachapuram. The session was

conducted by citing numerous examples of successful entrepreneurs. By showcasing success stories and sharing best practices, the event inspired students and even faculties to pursue their entrepreneurial dreams. Three faculties and eighty students attended the session.

#### 10. Soap Making, Skill Development Programme



To provide participants with comprehensive knowledge about the soap making process, including the chemistry behind soap formation, types of soap, ingredients used, and safety. precautions. To enhance participants' ability to troubleshoot common issues encountered during the soap making process, such as lye calculations, fragrance blending, and achieving desired textures and colors.

The skill development program was conducted on two days 11-01-2024 and 12-01-2024 in Chemistry laboratory. The students were given step-by-step instructions for making soap using the cold process method, including mixing oils, preparing lye solution, adding fragrances/colors, pouring into molds, and curing. Students were also given training on selling of the manufactured soaps. They were given a chance to sell the soaps in college on 19-02-2024.



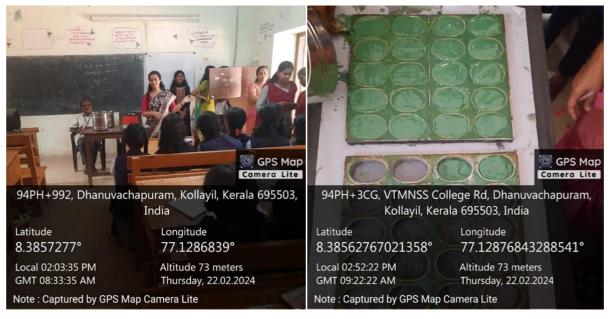
11. Soap Making Outreach Programme The entrepreneurship outreach program titled "The Art of Making Soap and Selling" was successfully conducted at the Government High School for Girls, Dhanuvachapuram, on February 22, 2024. This initiative was organized by the Department of Chemistry, VTMNSS College, Dhanuvachapuram, in collaboration with IQAC, IIC, and the Science Club, aiming to introduce high school students to the entrepreneurial aspects of soap making and selling.

Sri Bahuleyan S, the headmaster, Govt Girls High School, Dhanuvachapuram, extended a warm welcome to all participants, setting a positive tone for the program. Dr. Suprabha S, Convenor Science club, efficiently coordinated the event, highlighting its objectives and emphasizing the importance of entrepreneurship in today's world. Student coordinators, Shivs Nandu S B, Amutha S A, Anjali R P, Akshara P Sand Nimisha P Rajan elucidated the scientific principles behind soap making, offering a comprehensive understanding of the process. A live demonstration was conducted, showcasing the practical aspects of soap production. High school students actively participated in the program, engaging in discussions and seeking clarification on various aspects of soap making and entrepreneurship. The teachers of the school provided unwavering support throughout the event, actively participating in discussions and assisting students in their learning journey. As part of the program, students were involved in marketing the soap produced, gaining hands-on experience in sales and promotion.

The entrepreneurship outreach program proved to be a resounding success, achieving its objective of fostering entrepreneurial skills among high school students. By providing a platform for hands-on learning and interaction, the program empowered students with practical knowledge and insights into the soap making and selling process. Additionally, the marketing initiative enabled students to apply their newly acquired skills in a real-world scenario, further enhancing their understanding of entrepreneurship.

The collaborative efforts of all stakeholders, including the organizing committee, school authorities, teachers, and students, contributed to the success of the entrepreneurship outreach program. Such initiatives are instrumental in equipping young minds with the necessary skills and mindset to thrive in the competitive business landscape.

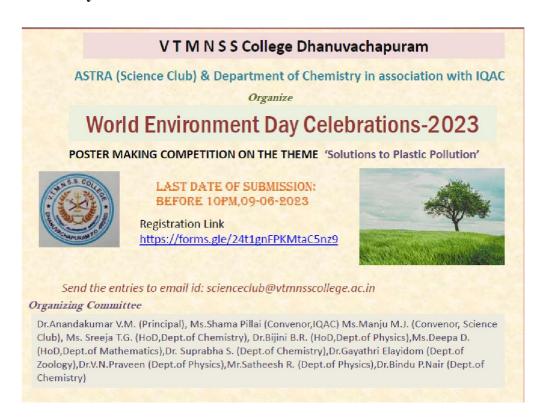




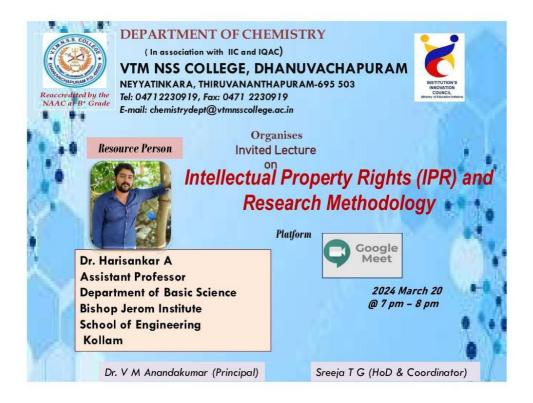


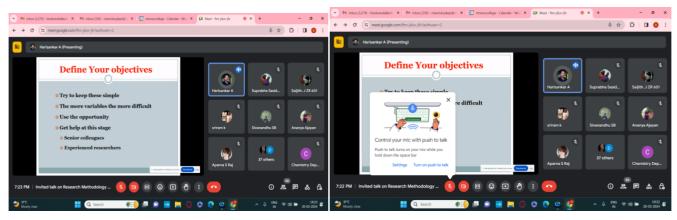
#### 12. Indigo Dye Separation-Skill Development Programme

#### **World Environment Day Celebrations-2023**



#### 13. Invited Lecture on IPR and Research Methodology





#### 15. Study Tour for final year students





#### 16. Field Visit to Kudankulam Nuclear power plant





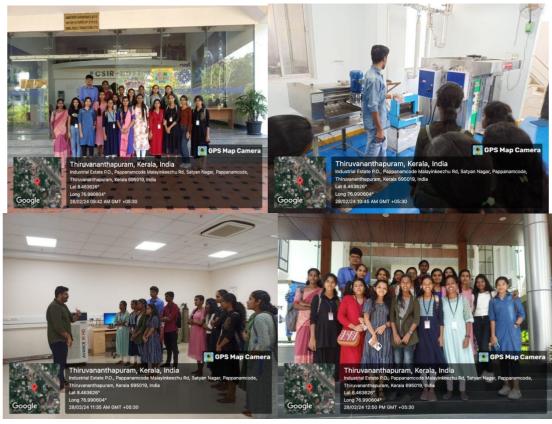


51 students and 3 faculty members of Department of Chemistry reached Nuclear Power Plant, Kudankulam (KKNP) at 9 a.m. They were given a detailed lecture about the importance of Nuclear energy, the technology adopted in KKNP, disposal of waste and by-products and safety measures. At 12 p.m., students and the faculty were allowed to visit inside of the KKNP except the sacrphagus. At around 2 p.m., a senior technical officer explained the functioning of KKNP in detail to the students.

#### 17. NIIST-FIELD VISIT

Department of Chemistry in association with Advance Learners Forum conducted a field visit to NIIST (CSIR) Thiruvananthapuram, as part of their one week one lab programme. 14 students and two faculties (Dr. Bindu P. Nair and Dr. Renjitha J.) from the department participated in the programme. The participants spent three hours in NIIST by visiting labs, attending various programmes conducted by NIIST and also millet fest stalls. The programme was highly motivational for the students.







The send-off of final year students took place on 31<sup>st</sup> March 2023 at the Department. The official send off programme was inaugurated by College Principal Dr. V M Anandakumar. All teachers of the department showered their blessings to the outgoing students. Sradha S. S. of second year Chemistry welcomed all and Akshara P. S. of second year Chemistry anchored the programme. The outgoing students shared their three years' experience with all of us. Students conducted various cultural activities. Students arranged sumptuous food for all . A group photo session was also arranged. The students departed with a resolution to reunite every year in alumni meet.

#### 19. Visit to Global Science Fest



#### 23. PTS Meeting

#### 1. for S1 Students.

PTS meeting of Semester 1 students were conducted on 10/02/2023.Meeting started with Acharyanusmaranam and welcome speech by head of the department Ms. Sreeja T. G. Principal Dr. V. M. Anandakumar delivered the presidential address. Major topic discussion of the meeting was semester 1 university examination and attendance. Parents were updated about their ward's performance and the remedial measures to be taken. Meeting ended with vote of thanks by Dr. Suprabha S, class tutor.

#### 1. For S4 students

PTS meeting of Semester 4 students were conducted on 09-06-2023. Meeting started with Acharyanusmaranam and welcome speech by head of the department Ms. Sreeja T. G. Principal Dr. V. M. Anandakumar delivered the presidential address. Major topic discussion of the meeting was semester 1 university result and attendance. Parents were updated about their ward's performance in exams and the remedial measures to be taken. Meeting ended with vote of thanks by Manju M J, the class tutor







#### 2. For S5 students





#### **Teachers Profile**

#### Sreeja T G

#### **Publications**

1.Harisankar, A., Preethi, P.C., **Sreeja, T.G.,** Rejani, P., Murali, M. and Dr. Resmi Raghunandan. 2024. Zinc oxide functionalized MOF-5 for the adsorptive removal of Pb (II) metal ions and photocatalytic degradation of methylene blue dye in aqueous medium. *Ionics*, pp.1-19

Preethi, P. C., Harisankar, A., Maneesha, M., **Sreeja, T. G.,** Al-Otaibi, J. S., Mary, Y. S., & Raghunandan, R. (2024). Sr (II) based one-dimensional coordination polymer as an efficient optical sensor for the detection of nitroaromatic explosives in aqueous medium. *Optical Materials*, 115750.

**Sreeja T.G.,** Harisankar, A., Preethi, P. C, Maneesha & Dr. Resmi Raghunandan.(2024) Polycyclic Aromatic Hydrocarbons present in kitchen air as potent exogenous aryl hydrocarbon receptor activators in human lung cells-an insilico analysis. Chemical papers (under review)

#### Workshop attended

1. Attended one week workshop on FYUGP Chemistry syllabus preparation

Programmed attended

1.attended the one day talk on "An Awareness Talk on Anti-Ragging Act and Legal Help" jointly organised by the Legal Studies Cell, Equal Opportunity Cell and PG Department of History in association with IQAC, VTM NSS College, Dhanuvachapuram on 27.07.2023.

2.attended the One Day Webinar on La Fierté - Pride Month Celebrations, 2023, organised by Women Study Unit/Women Cell, Equal Opportunity Cell & Human Rights Forum in association with IQAC, VTM NSS College, Dhanuvachapuram on 30.06.2023.

- 3.Participated in the One Day Orientation Programme on Four Year Under Graduation Curriculum Framework Organized by IQAC, VTM NSS College, Dhanuvachapuram on 07-08-2023.
- 4.Participated in the two day National Seminar on 'Biodiversity Matters: Preserving Our National Heritage' held from 12-10-2023 to 13-10-2023 in VTM NSS College, Dhanuvachapuram
- 5. Accompanying Faculty- Global science fest
- 6. Accompanying Faculty- Field visit to Kudankulam power plant

#### 2. Dr Suprabha S

- 1. Has undergone Innovation Ambassador Foundation Level Training in May 2024.
- 2.Coordinator of the programme Reading competition conducted on 19/06/2023 as a part of National Reading day
- 3. Coordinator of the entrepreneurship outreach program titled "The Art of Making Soap and Selling" was successfully conducted at the Government High School for Girls, Dhanuvachapuram, on February 22, 2024

#### 3. Dr Bindu P. Nair

- 1. Has undergone Innovation Ambassador Foundation Level Training in May 2024.
- 2. Participated in the Two Day Residential Training Programme cum I&E Exposure visit organized by St. Xaviers College, Aluva during 21-05-2024 to 22-05-2024.
- 3. Participated in the One Day Orientation Programme on Four Year Under Graduation Curriculum Framework Organized by IQAC, VTM NSS College, Dhanuvachapuram on 07-08-2023.
- 4. Participated in the two day National Seminar on 'Biodiversity Matters: Preserving Our National Heritage' held from 12-10-2023 to 13-10-2023 in VTM NSS College, Dhanuvachapuram.
- 5. Judge in Kerala School Sasthrolsavam 2023-24, held from 30-11-2023 to 01-12-2023.
- 6. Participated in the workshop entitled Python programming held on 23-03-2024.
- 7. Accompanying Feaulty- Field visit to Bio-Medical Technology Wing, SCTIMST on 18-11-2023.
- 8. Accompanying Faculty- Students's tour from 24-01-2024 to 27-01-2024.
- 9. Coordinator of the following programmes
  - 1. Idea Fest in July 2023
  - 2. Talk Start-up Ecosystem: An Introduction by Shri M. Krishnakumar on 19-06-2023
  - 3. Panel Discussion of the Best Ideas in the Idea Challenge on 11-08-2023
  - 4.Inter-Collegiate Idea Challenge 15-11-2023
  - 5. Talk We Are All Innovators by Prof. Achyut Sankar S. Nair on 09-10-2023

- 6. Skill Development Programme Soap Making and Marketing held during 11-01-2024 to 12-01-2024
- 7. Idea Challenge 2 and Exhibition held on 21-02-2024
- 8. Skill Exhibition held during 20-11-2023 to 21-11-2023

## **Annual Report 2022 – 23**

#### **Courses offered**

- 1. Core course–BSc Chemistry
- 2. Complementary courses—Chemistry courses to BSc Physics, Botany and Zoology
- 3. Open course Environmental Chemistry (*Offered to S5 students from other departments*).
- 4. Elective course Polymer Chemistry (*Offered to S6 students pursuing BSc Chemistry*)

**Annual student intake** – 38

Students admitted to first year during 2022 - 23 - 30

Total number of boys (all batches) -6+6+10=22

Total number of girls (all batches) -31+24+21=76

Total number of differently abled students (all batches) – Nil

**Total number of students from other states** – one

**Total number of students - 98** 

**Number of full-time teaching posts**– 4 (*one post vacant*)

Students to full-time teacher ratio – 24.5

### Faculty, staff and student details

#### **Faculty**

Sl. No.	Name	Designation
1	Sreeja T G	Assistant Professor & Head

2	Dr. Suprabha S	Assistant Professor
3	Dr. Bindu P. Nair	Assistant Professor
4	Manju M J	Assistant Professor
5	Dr.Renjitha J	Guest faculty (joined on 28.10.2022 FN)
6.	Mrs.Sreelekshmi	Guest faculty (joined on 28.10.2022 FN)

## Non-teaching staff

Sl. No.	Name	Designation
1	Mrs. Sreelekshmi	Laboratory Assistant

## **Department Level Committees**

## **Course Coordinators** (for core courses)

Sl No	Batch	Name
1	3 <sup>rd</sup> year (Sem 5 & 6)	Dr. Bindu P Nair
2	2 <sup>nd</sup> year (Sem 3 & 4)	Manju M J
3	1st year (Sem 1 & 2)	Dr. Suprabha S

## Faculty Advisors (for complementary courses)

Sl. No.	Batch	Name
1	I B Sc Physics (Sem 1 & 2)	Dr. Suprabha S
2	I B Sc Botany (Sem 1 & 2)	Dr. Suprabha S
3	I B Sc Zoology (Sem 1 & 2)	Dr. Bindu P Nair
4	II B Sc Physics (Sem 3 & 4)	Manju M J
5	II B Sc Botany (Sem 3 & 4)	Dr. Bindu P Nair
6	II B Sc Zoology (Sem 3 & 4)	Dr. Suprabha S

**Faculty Members in College Level Administrative Committees** 

Sl. No.	Name of the faculty member	Administrative assignment
1.	Sreeja T G	Convener- UG and PG Admission committee, Purchase committee, Community Health activity Club,  Member-NAAC steering committee, Health education club, Debate club, Open course committee, Library committee, College Level Monitoring Committee
2.	Dr. Suprabha S	General Coordinator- CBCSS Clubs,  Member -Science club, Academic committee, Research committee, College Calendar Committee, Admission committee, MIS committee and in Committee for Disabled and Elderly Persons
3.	Dr. Bindu P Nair	Convener- SC/ST Minority Cell, Institute's Innovation Council, Member-NAAC steering committee, Equal Opportunity Cell, Advance Learners Forum, Research Committee and Academic Committee, Faculty adviser (B.Sc. III <sup>rd</sup> year)
4.	Manju M J	Examination Committee-University (Additional Chief Superintendent), Science Club Convenor  Member-ICT/IT initiatives, Anti narcotics cell, Remedial teaching, Community Based Activities

## **Department Level Activities**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish a newsletter summarizing our activities during each academic year. Head of the Department Ms.Sreeja T G is the staff editor of this year's department newsletter. Mr. Sidharth and Ms.Devika Anil (S6 Chemistry students) are the student editors.

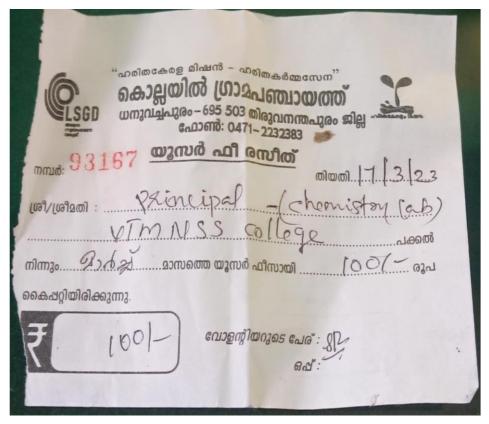
### Go Green Campaign

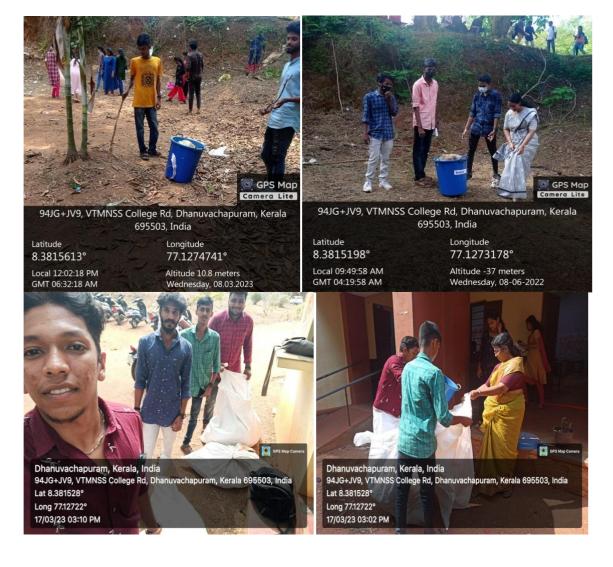
Our department has started a green initiative in the name *Go Green* campaign from the academic year 2019-2020. It primarily aims at making the students aware about the need for keeping our environment clean and also to make effective steps in the scientific disposal of waste materials. In line with the objectives of the campaign, department level activities were conducted in strict adherence to green protocols so as to ensure minimal production of waste along with its proper disposal. Various initiatives under the campaign are coordinated by Dr.Suprabha S.

As part of the green initiative, the department placed several waste bins to collect different types of wastes. Plastic waste is collected and handed over to the recycling unit of Neyyattinkara municipality. Chemical wastes are buried under huge pits after neutralization.

As part of world 49 <sup>th</sup> World environment day and go green campaign, we have conducted *think green*, planting a tree and cleaning our campus programme. The programme was conducted in offline mode. The programme was inaugurated on 8<sup>th</sup> June 2022 at 10 am by the Principal Dr. V M Anandakumar. The programme was coordinated by Dr. Suprabha S and presided by Ms Sreeja T G, Head of the department. <a href="https://drive.google.com/file/d/liaWshN0kY-ipTaJQXwc\_J2GpGgQEiNqk/view?usp=share\_link">https://drive.google.com/file/d/liaWshN0kY-ipTaJQXwc\_J2GpGgQEiNqk/view?usp=share\_link</a>

students made a video of the programme.





## **Achievements**

#### Academic

#### **Student Progression to Higher Studies**

For the 2022 pass-out batch, out of 40, 23 students completed the course successfully and Sreedevi L K got third rank in University. 14 secured admission to higher studies. Details of students who secured admission for higher courses at various institutions are given below.

Sl No	Name of student enrolling into higher education	Name of institution joined	Name of programme admitted to
1	Sreedevi L K	University College,Tvpm	MSc Chemistry
2	Surya P R	Emmanuel College, Vazhichal	MSc Bio Chemistry
3	Sherin S H	Fathima Matha National College, Kollam	MSc Chemistry
4	Samyuktha S	Christian College, Kattakada	MSc Chemistry
5	Archa S R	CSI College, Parasaala	B.Ed
6	Anusha Das C M	KUCTE,Kumarapuraam	B.Ed
7	Krishna Priya S S	NMCC Marthandam	MSc Chemistry
8	Ameesha S	St John's College, Anchal	MSc Chemistry
9	Saika V Gopal	NSS College, Pandalam	MSc Chemistry
10	Najeena J O	SN College, Kollam	MScAnalytical Chemistry

11	Arathy Krishna S R	Sidhartha College of Teacher Education	B.Ed
12	Krishna Gopika G N	CSI College, Parasaala	B.Ed
13	Sreethu L S	Diet, Alappuzha	D.El.Ed
14	Deeja M S	CSI teacher training Institute, Chembur	D.El.Ed

#### **Student achievements**







Sidharth Chandran (III DC Chemistry) was elected as III DC representative in College Union-2022-2023



Naveen A M (II DC Chemistry) was elected as II DC representative in College Union-2022-2023



Akhila M -III DC -appointed as GDS ABPM Sethuparvathipuram BO by Govt of India, Dept of Post.



Sona -III DC -appointed as GDS ABPM Vizhikkithodu by Govt of India, Dept of Post.



Gokul J. (IIIDC Chemistry) participated in the National Yoga Competition held in Orissa during Dec 22-30, 2022

## Alumni



1.Soorya P S appointed as junior assistant in KSFE



2. Monisha Mohan- appointed as Clerk in Health Service Department on 27.01.23



3.Athira D S- appointed as UPST in govt.HSS Balaramapuram



4. Harikrishnan G appointed as Constable in CISF



5. Subin S-appointed as LD clerk by KPSC

6. Arun M P-appointed as Office Attendant

by KPSC

#### Student participation in various competitions

1. Haritha Krishnan (IIIrd DC Chemistry) secured second prize in TSC IGC Firing competition held during NCC camp at Neyyattinkara.

#### **College Youth Festival and Competitions**

- 1. Kavya P. Rajendran received first prize for short story writing in college youth festival.
- 2. Aswathy A.S. received first prize for English recitation in college youth festival.
- 3. Ardra R. Nath received second prize for English recitation and Light music in college youth festival.



- 4. Abhimanyu R S, Abhin V S, Gowri S P, Karthika secured Ist Prize in Vanchipattu in college level art festival
- 5. Abhimanyu R S, Abhin V S, Gowri S P participated in Vanchipattu competition in Kerala university youth festival held at Ambalappuzha
- 6. Gayathri J S and Divya G Got second prize in quiz competitions conducted by the Department of Mathematics, VTMNSS College, Dhanuvachapuram

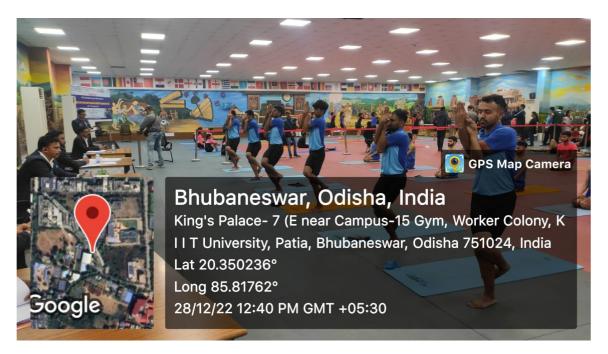
#### Student achievements in sports

#### Runner up -cricket

Chemistry Department team became the first runner up in inter department cricket tournament



- 1. Aswin J. participated in inter-collegiate cricket tournament held at Mar-Ivanios College, Thiruvananthapuram on 20-01-2023.
- 2. Gokul J. of 3<sup>rd</sup> BSc Chemistry got participated in yoga competitions in Odisha



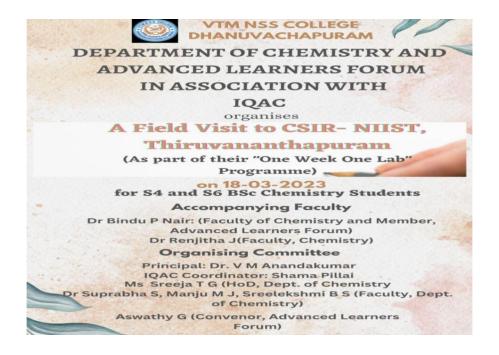
- 3. Chemistry Department got second prize in inter-department football championship
- 4. Girl students of the Department of Chemistry won first prize in Tug of War conducted during Onam celebrations.

#### Fresher's day

Fresher's day Celebrations of the Department took place on 29<sup>th</sup> November 2022. Second and third year students gave a warm welcome to newcomers. The function was inaugurated by Mrs.Sreeja T G, HoD Chemistry and all other teachers felicitate the function. First year students introduced themselves and some cultural activities of students were also conducted.

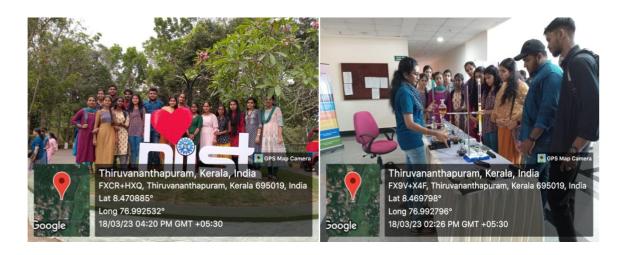


#### Field Visit to NIIST (CSIR) Thiruvananthapuram



Department of Chemistry in association with Advance Learners Forum conducted a field visit to NIIST (CSIR) Thiruvananthapuram, as part of their one week one lab programme. 14

students and two faculties (Dr. Bindu P. Nair and Dr. Renjitha J.) from the department participated in the programme. The participants spent three hours in NIIST by visiting labs, attending various programmes conducted by NIIST and also millet fest stalls. The programme was highly motivational for the students.

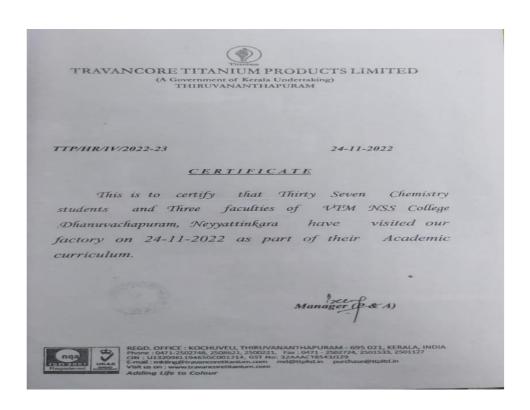


# Industry Visit at Travancore Titanium Limited and Study Tour to Marayoor for final year students





B.Sc. final year students visited Travancore Titanium Ltd. Thiruvananthapuram on 24-11-2022, as part of industry visit prescribed in the curriculum. The study tour was from 24<sup>th</sup> to 27<sup>th</sup> November 2022 and the places visited include Marayoor and Munnar. Dr Bindu P. Nair and Ms. Manju M.J. accompanied 37 students.



#### Farewell function of S6 students

The send-off of final year students took place on 31st March 2023 at the Department. The official send off programme was inaugurated by College Principal Dr. V M Anandakumar. All

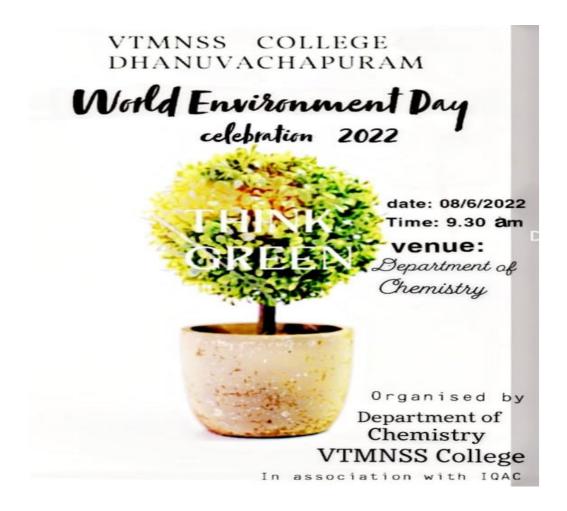
teachers of the department showered their blessings to the outgoing students. Sradha S. S. of second year Chemistry welcomed all and Akshara P. S. of second year Chemistry anchored the programme. The outgoing students shared their three years' experience with all of us. Students conducted various cultural activities. Students arranged sumptuous food for all . A group photo session was also arranged. The students departed with a resolution to reunite every year in alumni meet.





## **Programmes Organized**

#### 1. World Environment day



As part of world 49 <sup>th</sup> World environment day and go green campaign, we have conducted *think green*, planting a tree and clean our campus. The programme was conducted in offline mode. The programme started with a silent prayer and was inaugurated on 8<sup>th</sup> June 2022 at 9.30 am by the Principal Dr. V M Anandakumar by planting a sapling in front of the department. Then a Pledge was delivered by Sradha S.S of S2. Class choir recites a poem based on the protection of the environment. The programme was coordinated by Dr. Suprabha S and presided by Ms Sreeja T G, Head of the department and was anchored by Keerthana S J of S2. Adarsh Krishna of S2 delivered the vote of thanks. Then the students together planted several saplings.

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**Outcome**: The purpose of celebrating this day is to raise awareness among people to protect the environment. It was first started in 1974 with the theme: "Solutions to plastic pollution". The theme of World Environment Day 2022 is "Only One Earth", focusing on "Living Sustainably in Harmony with Nature".

#### 2. Awareness Programme on Well water purification



Department of Chemistry & Community Health Activity Club

In association with IQAC

Awareness Programme on Well-Water Purification using KMnO <sub>4</sub> in the Panchayat of Kollayil

Date: 15/07/2022 Time: 11.00 a.m.

#### Organizing Committee

Dr. V. M. Anandakumar (Principal)

Ms. Shama Pillai (IQAC Convener)

Ms. Sreeja T G (HoD &Community Health Activity Club Convener)

Dr. Suprabha S.

Dr. Bindu P. Nair (Coordinator)

Ms. Manju M. J.

An awareness programme was conducted for the people of Kollayil panchayat on the use of potassium permanganate for well-water purification. Dr. Suprabha S. and Dr. Bindu P. Nair accompanied 6 student volunteers of Semester 4 B.Sc. Chemistry programme. Students explained the mechanism of water purification using KMnO4 and also illustrated how to use it for well-water purification. They explained that when treating drinking water, a concentration of 2 g KMnO4 per 1000 l has been found to be very effective. They also explained the need for agitation by turning the well on and off, which brings water up through the well casing and then lets it fall back into the well. People of Kollayil Panchayat gave positive reviews on the effort by students of the Department of Chemistry.





# 3. ONE WEEK SKILL DEVELOPMENT COURSE ON YOGA AND LIFE STYLE

Yoga in higher education is about acquiring a new way of living. It can physically and intellectually prepare students for the integration of their physical, mental, and spiritual faculties, allowing students to become healthier, saner, and more integrated members of society and nation.

Yoga education promotes self-discipline and self-control, which leads to increased awareness, attention, and consciousness. The following are the goals and objectives of Yoga education:

- 1) To ensure the student's health.
- 2) To practice mental hygiene.
- 3) To be emotionally stable.
- 4) To incorporate moral values.
- 5) To reach a greater degree of consciousness.

Department of Chemistry and Community Health Activity Club in association with IQAC organised one week programme on Yoga and life skills. The programme was from 22.07.22 to 29 .07.22 at 2.30 pm in room number 29, near Chemistry Department and was inaugurated by the Principal Dr.Ramesh Kumar .The student Gokul J of 3 <sup>rd</sup> BSc Chemistry was the trainer of yoga classes. 40 students and teachers from Community Health Activity club and

Chemistry were joined in these yoga sessions.



#### VTM NSS COLLEGE, DHANUVACHAPURAM

Thiruvananthapuram, Kerala 695503 Ph: 0471 2232240, E-mail: vtmnsscollege@yahoo.in

# Department of Chemistry & Community Health Activity Club In association with IQAC Organizes

One Week Skill Development Course on Yoga and Life Style

Date: 22/07/2022 to 29/07/2022

Time: 2.30 p.m.- 3.15 p.m.

Venue: Chemistry Department

Trainer : Gokul J. (B.Sc. S4 Chemistry student)

#### Organizing Committee:

Dr. V. M. Anandakumar (Principal), Ms. Shama Pillai (IQAC Convener), Ms. Sreeja T. G. (HoD & Community Health Acctivity Club Convener), Dr. Suprabha S., Dr Bindu P. Nair, Ms. Manju M. J.

First day at 2.30 pm (22.07.22), the programme was inaugurated by our Principal. HoD Sreeja T G, Yoga trainer Mr.Gokul J and all other teachers were present. Principal told that Yoga poses and activities give young children a better awareness of their own bodies and

how they move, self-regulation skills, relaxation skills, imagination & creativity, communication & confidence, persistence, teamwork, resilience & ability to deal with change.







#### Day 1: Pranayama

On the first day, the program commenced with an introduction to pranayama, a fundamental yogic practice focused on breath control. Students were guided through various breathing techniques to elevate the prana (vital life force) in their bodies. Pranayama helps in calming the mind, increasing lung capacity, and promoting overall mental and physical health.



Day 2: Introduction to Yogasanas

The second day (25.07.2022) of the program was dedicated to introducing students to the world of yogasanas (yoga postures). They were shown different types of asanas, classified as standing, sitting, prone, and supine poses. The session started with standing asanas to activate the entire body, followed by sitting asanas that provided a good stretch to the back

and neck, and also grounding benefits.



Day 3: Practicing 12 Basic Yoga Asanas

The focus of the third day (26.07.2022) was on practicing 12 basic yoga asanas, which are foundational postures in yoga. These asanas included:

Headstand (Sirsasana)

Shoulderstand (Sarvangasana)

Plough Pose (Halasana)

Fish Pose (Matsyasana)

Sitting Forward Bend (Paschimottanasana)



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Local 03:00:22 PM GMT 09:30:22 AM Longitude 77.1272841°

Altitude 0 meters Tuesday, 26-07-2022



### Day 4(27/07/2022): Practicing Basic Yoga Asanas

Cobra Pose (Bhujangasana)

Locust Pose (Salabhasana)

Bow Pose (Dhanurasana)

These asanas provide various physical and mental benefits, such as improved flexibility, strength, and focus.







#### Day 5: Yogasanas for Daily Life

On the fifth day (27.07.2022), students were introduced to a set of yogasanas that can be easily incorporated into their daily routines to maintain a healthy body and mind. Some of the asanas covered in this session were:

Seated Forward Bend (Paschimottanasana)

Low Lunge (Anjaneyasana)

Warrior 2 (Virabhadrasana II)

Triangle Pose (Trikonasana)

Tree Pose (Vrksasana)

Locust Pose (Salabhasana)

Bridge Pose (Setu Bandha Sarvangasana)

Cow Face Pose (Gomukhasana)

Legs Up the Wall (Viparita Karani)

These asanas are known for their ability to improve flexibility, balance, and overall physical health.



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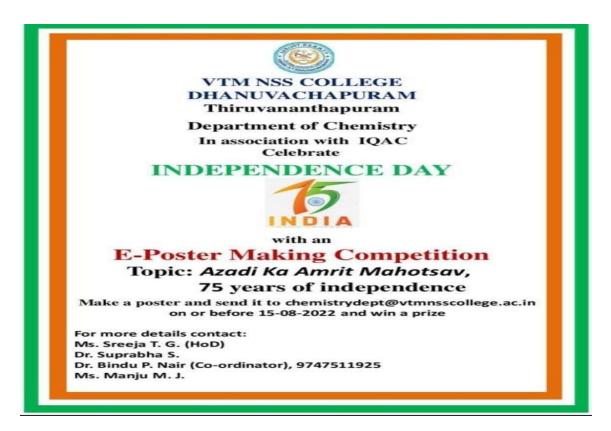
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Local 03:19:20 PM GMT 09:49:20 AM Longitude 77.1272841°

Altitude 0 meters Friday, 29-07-2022 Outcome: Yoga and mindfulness offer psychological benefits for children as well. A growing body of research has already shown that yoga can improve focus, memory, self- esteem, academic performance, and classroom behavior, and can even reduce anxiety and stress in children. Learn and demonstrate a set of practical skills such as time management, self management, handling conflicts, team leadership, etc.

#### 4. Independence day Celebration



A poster competition was conducted for the students of Dept. of Chemistry in connection with the 75th Independence Day celebration. The programme was coordinated by Dr. Bindu P. Nair. A total of six posters were received on the theme Azadi Ka Amrit Mahotsav. Miss Alfa M.S. of III<sup>rd</sup> DC Chemistry was declared the winner.





5. Oral Presentation Contest- Nobel Laureates in Chemistry-2021



**Aim**: To improve communication skill and personality development of the students

Report: An oral presentation contest was organized by Department of Chemistry in association with IQAC on 22/08/2022 at 10.00 am in the seminar hall. The presentation was on the topic "Nobel Laureates in Chemistry-2021". The programme began with the prayer song. Dr Suprabha S, Coordinator of the programme delivered welcome address. Ms Sreeja T G, HoD, Department of Chemistry gave presidential address. Dr Remesh kumar S, Principal, VTMNSS College, Dhanuvachapuram inaugurated the programme. Ms Shama Pillai, Coordinator, IQAC felicitate the programme. Dr Bindu P Nair, Ms Manju M J was gave their valuable presence for the programme. Sreedevi L K, Former student of Department of Chemistry and Third rank holder from the university of Kerala, 2022 batch and also Qualified JAM 2022 also motivate our students and helped to judge the presentations. There was five teams for presentation and the competition was conducted in a well organized manner. After the competition

each teachers congratulated the students who were participated in the programme and shared their knowledge











#### Winners of the programme

First st Prize: Sradha S S & team, IInd year Chemistry

2<sup>nd</sup> Prize: Niranjan Sundar J S & team ,II<sup>nd</sup> year Chemistry

Vote of thanks was delivered by Sradha S S, II<sup>nd</sup> year Chemistry. The programme was winded up by 12.30 pm.

**Feedback:** From the feedback collected from the students it is clear that this programme helped the students to reduce their stage fear, improve communication skills. Some students reported that this programme helped them to develop the habit of deep reading about a topic and to improve presentation skill.

#### 6. Sent off to Dr. Nitha teacher

Dr. Nitha L P transferred to MG College, Trivandrum. Department arranged a small sent off function 0n 30.06.2022 to her and gave a memento as token of love and appreciation





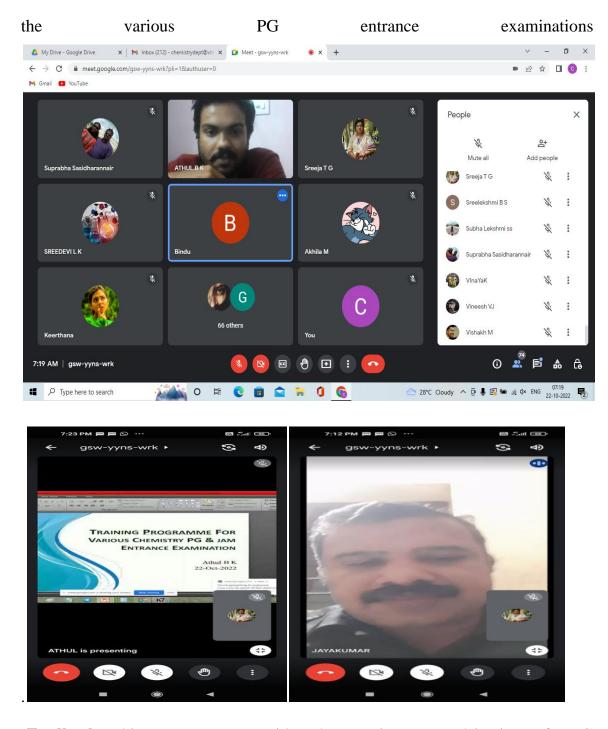


# 7. DAL and Training Programme for PG Entrance Exams (JAM, IISER, NIT, Central Universities)

**Aim:** To encourage student progression to higher studies in internationally reputed institutes with our distinguished alumni.



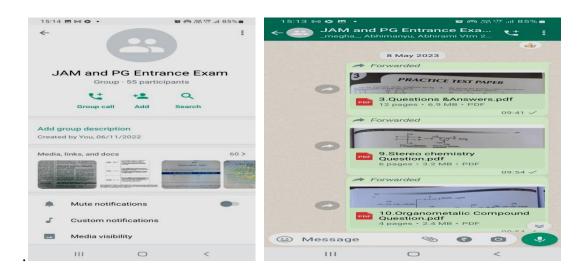
**Report**: A training programme for PG entrance examination was conducted by department of Chemistry in association with IQAC on 22/10/2022 7 pm. The programme was conducted in online mode. Dr Suprabha S gave a welcome speech, Ms Sreeja T G, HoD, Department of Chemistry gave a presidential address. The programme was inaugurated by Dr Jayakumar R, Principal in charge. Our resource person Athul B K(2018-20 batch), now Student at IIT, Palakkad (qualified JAM 2021 & Former student, Dept. of Chemistry, VTMNSS College, Dhanuvachapuram took the session in detail. He gave awareness about



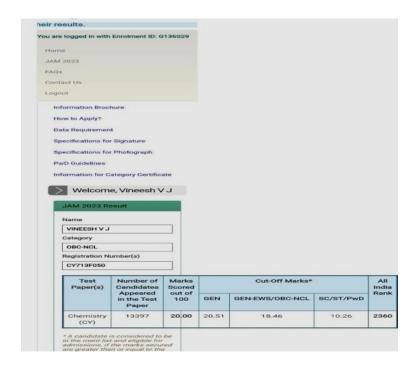
**Feedback:** This programme gave idea about various reputed institutes for PG study and motivated the student in greater extent.

After the inauguration of the programme, student feedback as well as from the suggestions received from IQAC, our department started an online coaching

session for JAM and other PG entrance examinations. The sessions were given to students who expressed their willingness to appear for the entrance examinations. Fifty students joined for the class and online – sessions were handled by the faculty members of the department. The training programme is coordinated by Dr. Bindu P Nair



**Outcome**: Two of our students Anusree C. S. (AIR-975) and Vineesh V. J. (AIR-2360) qualified JAM-2023, which was a great achievement for the department



Students got an opportunity to interact with successful professionals from the same institute. Also, the programme provides an opportunity for the department to recognize the former students who are successful in their life

#### 8. Examination Guidance Session for First Year Students

**Aim:** To give guidance for the first year Chemistry students and their parents about the upcoming S1 Examination as they are facing university exams for the first time.

**Report:** To give awareness about the university examination, Department of Chemistry conducted an examination guidance session on 11/03/2023, Saturday @11.00 am. The programme was conducted as online mode in Google Platform.



**Outcome:** Students told that through this awareness programme on these exam days, increased the confidence level and faced the S1 exam in very good manner.

## 9. World Ozone Day-2022



**Aim:** To enhance the communication skills, presentation skills of the Chemistry students and to promote the awareness about the ozone day celebration

**Report:** The programme was conducted in the seminar hall of VTMNSS College, Dhanuvachapuram on 27/09/2022, Tuesday @ 10.00am. Sreeja T.G., HoD of Chemistry department gave the presidential address. Dr.Ramesh kumar S. did the inauguration. Manju M.J., was the coordinator of the program .Dr.Suprabha S. and students asked some queries during the Q and A session. Dr Bindu P Nair delivered a vote of thanks.

#### Winners of the programme

First position: Abhirami Asok S, 3<sup>rd</sup> BSc Chemistry

Second position: Devika Anil C, 3<sup>rd</sup> BSc Chemistry

Third position: Abhimanyu R.S. first BSc Chemistry

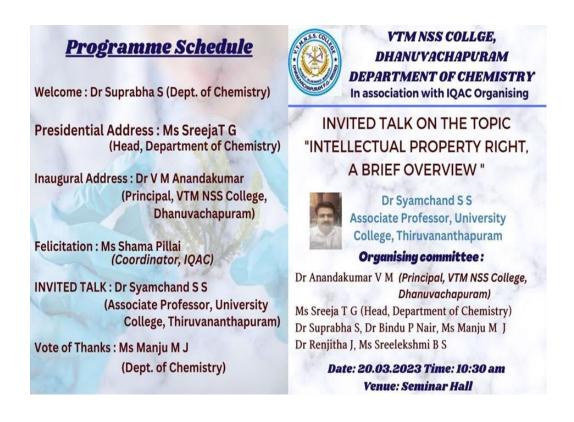
**Feedback:** From the feedback collected from the students it is clear that this programme has helped the students to reduce their stage fear, improve presentation skills and enhance confidence.



# 10. Pedestal seminar on the Topic "Intellectual Property Right, a Brief Overview

. As part of IQAC quality initiatives *Pedestal*, an annual inter-disciplinary seminar series, is organized in association with the departments of our college. This year,

it was decided to conduct the seminar in online mode. We organized our seminar on 20<sup>th</sup> March 2023 at 10.30 am.



Aim: To create awareness on IPR among faculty and students of the college

**Report:** Sensing the importance for the protection of IPR in today's globalizing knowledge based economy, an invited talk on the topic "Intellectual property right, a brief overview" was conducted by the Department of Chemistry in association with IQAC on 20/03/2023 at 10.30 am at seminar hall. Dr Suprabha S gave welcome speech, Ms Sreeja T G; Head of the department gave Presidential address. The inaugural address was given by Dr V M Anandakumar, Principal, VTM NSS College, Dhanuvachapuram. Ms Shama Pillai gave the felicitation speech. Our Resourse person Dr Syamchand S S, Associate Professor, Dept. of

Chemistry, University College, Thiruvananthapuram, took the invited talk in detail.

**Feedback**: Participants gave a very good fed back for this programme. Students and teachers got awareness about copy right and trademark, ethical issue related ti IPR, Patent systems in India, Tools for patent searching etc.





## 11. Department Merit Day



**Aim:** To acknowledge brilliant students for their academic performance as well as extracurricular activities

**Report**: Department of Chemistry in association with IQAC, conducted a merit day on 20/03/2023. The following students are secured meritorious award

- 1. **Athul B K**: Qualified JAM 2021
- Sreedevi L K: Third Rank Holder, BSc, Chemistry 2022 and qualified JAM 2022
- 3. Anusree C S: Class topper (S1, S2, S3) 2020-23 Batch
- 4. Vineesh V J: Class topper (S1, S2, S3) 2020-23 Batch
- 5. Oral Presentation winners: First Prize: Sradha S S,

Second Prize: Niranjan Sundar J S

# 6. Poster Presentation competition: Winner, Alfa M S





Outcome: The students should be motivated by the programme.

# 12. National Conference on Advanced Functional Materials (NCAM-2023)



Chemistry department became part of the National Conference on Advanced Functional Materials(NCAM-2023) organized as part of Annual Research Conference on Science, Social Science, Commerce, Arts and Language (ARCSSCAL) 2023, by the Research Committee in association with IQAC. There were four invited talks and oral and poster presentations on 23<sup>rd</sup> and 24<sup>th</sup> March 2023.

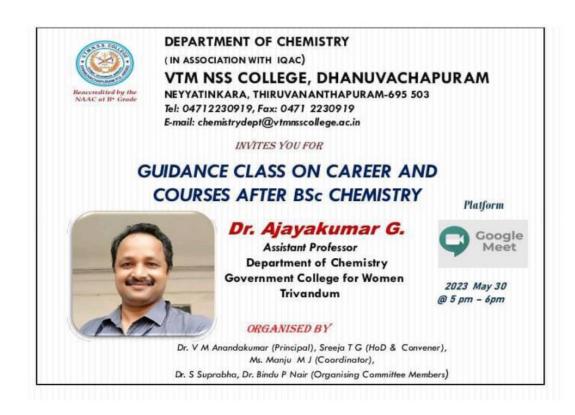
**Outcome**: The conference was gathering of group of people to share their research ideas and knowledge of specific techniques and topics in the field of chemistry and physics. It helps both teachers and students to meet people from all around India. It allowed all to nurture their brain and to be open to new ideas and concepts







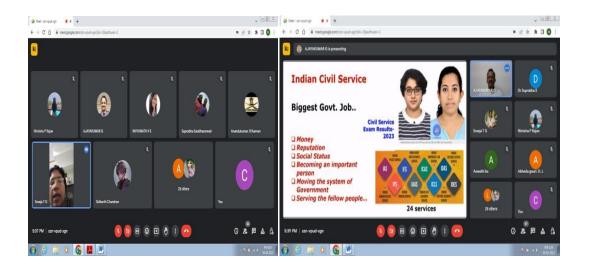
## 13. Guidance Class on Career and Courses after BSc Chemistry

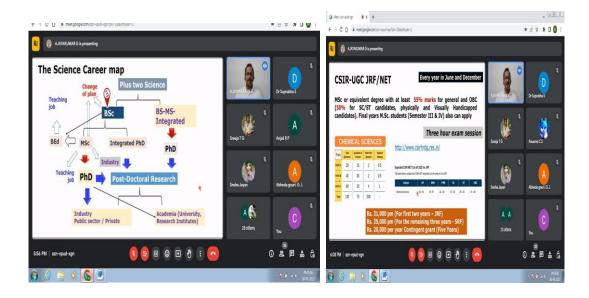


**Aim**: To give ample guidance for the Chemistry students about the opportunities available in various fields including chemistry after graduation.

**Report**: The programme was conducted as online mode in Google Platform on 30/05/2023, Tuesday @05.00 pm. Sreeja T.G., HoD of Chemistry department gave the welcome speech. Manju M.J., Coordinator of the program introduced the resource person Dr.Ajayakumar G to conduct the session. Dr.Suprabha S. and students asked some queries during the Q and A session. Dr Bindu P Nair delivered vote of thanks.

**Feedback**: Participants gave very good feedback for this programme. Students got awareness related to various job opportunities in diverse fields. They also get a clear cut understanding about the entrance tests, preparation of the tests, and admission procedure in higher studies including MSc, PhD and PostDoc in the field of Chemistry.





## 14. Onam Celebration

Chemistry department also became the part off onam celebrations in the college on 31.08.2022. Celebrated Onam on the department's premises amidst much fanfare involving staff and students. The celebrations started with setting up of an attractive floral decoration (pookalam) in the class room that was reminiscent of the agrarian past of Kerala, a South Indian state. Impressive designs and artistic creativity were the hallmarks of the Pookalam, which turned out to be attractive and mesmerizing and took everyone into a world of festivity and fun. The main attractions of the programme were onappattu, skits, speech, group songs, and solo songs. The arrival of Mahabali amid the beats of panchavadyam was well-received by the audience. Another attraction of the day was the traditional 'onasadya' that comprised more than 15 dishes served on banana leaves and included varieties of vegetables, rice, banana and payasam. Dr Ramesh Kumar, Principal, addressed the gathering and conveyed greetings and wishes of the festival.





#### 15. Christmas Celebration

Christmas is the festival which inspires the spirit of sharing and caring. Christmas celebration was held on 22<sup>nd</sup> December 2022, in the department. The department was beautifully decorated .The programme started with information about Christmas and why is it celebrated. The event ended with cheerful Christmas greetings as the students danced to the melodious tunes of 'Jingle Bells' and 'We wish you a merry Christmas.' The dazzling entry of Santa Claus added to the joy and excitement of the students. The boundless joy of celebrating the festival was visible on the faces of all the students. It was a joyous and amusing programme





# 16. Holi Celebration

Holi is a big festival of colors. All elders, youngsters, children celebrate it with great zeal. They wait for this programme for months. There is no doubt; this festival is more for the children. This year, the festival was celebrated on 16<sup>th</sup> of

March. Chemistry department also became part of the holi .In our college, there was a great arrangement for celebrating this festival of fun and frolic.



## 17. Food Fest

Students of the Department of Chemistry participated in the food fest organized by the college union on 24-02-2023. The energetic students prepared delicious food items including kizhi parotta, lime juice etc. The food items were in high demand and got sold in the first 30 minutes. The students had a fun time in preparing and selling the food items.



# **PTS** meetings

#### 1. for S1 Students.

PTS meeting of Semester 1 students were conducted on 10/02/2023.Meeting started with Acharyanusmaranam and welcome speech by head of the department Ms. Sreeja T. G. Principal Dr. V. M. Anandakumar delivered the presidential address. Major topic discussion of the meeting was semester 1 university examination and attendance. Parents were updated about their ward's performance and the remedial measures to be taken. Meeting ended with vote of thanks by Dr. Suprabha S, class tutor.



#### 4. For S4 students



PTS meeting of Semester 4 students were conducted on 11-07-2022. Meeting started with Acharyanusmaranam and welcome speech by head of the department Ms. Sreeja T. G. Principal Dr. V. M. Anandakumar delivered the presidential address. Major topic discussion of the meeting was semester 1 university result and attendance. Parents were updated about their ward's performance in exams and the remedial measures to be taken. Meeting ended with vote of thanks by Dr. Bindu P.Nair, the class tutor.

#### 3. For S5 students

PTS meeting of Semester 5 students were conducted on 14-11-2022. Meeting started with Acharyanusmaranam and welcome speech by Dr. Bindu P. Nair. Ms. Sreeja T. G. delivered the presidential address. Various matters related to curricular and co-curricular activities of the students were discussed. Another important topic of dicussion was the students' study tour and industry visit. Parents raised a few concern regarding the conduct of tour, which was answered by the head of the department. Meeting ended with vote of thanks by Ms. Manju M. J.



# Sent off to Principal Dr. V M Anandkumar



# **Teachers Profile**

# 1. Sreeja T G

#### **Publications**

"Spectral, thermal, structural and DFT studies of new luminescent heterobimetallic MOF of lead and sodium based on diglycolic acid ligand having unusual coordination environment for photodegradation and antibacterial applications" journal-of-molecular-structure, Volume 1285, 5 August 2023, 135472

#### https://doi.org/10.1016/j.molstruc.2023.135472

#### **Oral Presentations**

1. **Sreeja T G**, *Interaction of Human Toll Like Receptor With Benzo[a]pyrene and naphthalene –An Insilico Analysis*, Oral presentation in the two day National Conference on Advanced Functional Materials-2023 as part of ARCSSCAL 2023, jointly organised by the Department of Physics, Department Chemistry and R and D cell in association with IQAC, VTM NSS College, Dhanuvachapuram from 23.03.2023 to 24.03.2023

### **Social Organisations**

Membership in Academy of Chemistry Teachers, Thiruvanathapuram, Kerala, Regn No. 774/91, Certificate No.: ACT/114/2022-23

# Participation in seminars/workshops/conferences/courses

- 1. Participated in the Short term Course in Disaster Management for University/ College teachers conducted by the UGC-Human Resource Development Centre, University of Kerala, sponsored by the University Grants Commission from 04.11.2022 to 10.11.2022.
- 2. Successfully participated in IP Awareness/Training program under National Intellectual Property Awareness Mission on March 08, 2023 organised byIntellectual Property Office, India
- 3. Participated in the UGC-Sponsored Online National Webinar on "Multidisciplinarity & NEP" conducted by the UGC-Human Resource Development Centre, University of Kerala, Kariavattom, Trivandrum on

#### **Details of Convener of Programmes**

- 1. Convener Poster Competition as part of Independence Day Celebration conducted by Department of Chemistry in association with IQAC in August 2022.
- 2. Convener the awareness programme on Well-water Purification using KMnO4 in Kollayil Panchayat on 15/07/2022
- 3. Convener and Coordinator of the programme Value added course on Yoga and Life skills conducted by Dept. of Chemistry& Community health activity club in association with IQAC from 22/07/2022 to 29/07/2022
- 4. Convener -Oral Presentation contest on the topic Nobel Laureates in Chemistry-2021 conducted by Department of Chemistry in association with IQAC on 22-08-2022.
- 5. Convener- Oral presentation competition conducted by Department of Chemistry in association with IQAC on 27/09/2022 in connection with World Ozone day Observance.
- 6. Convener "Training programme for PG Entrance Exams (JAM,IISER,NIT,Central Universities) conducted by Department of Chemistry in connection with IQAC on 27/10/2022
- 7. Convener- Global Science for Global well being conducted by Science club and Department of Chemistry in association with IQAC on 06/03/2023.
- 8. Convener- invited talk on the topic "Intellectual Property Right, A Brief Overview" conducted by Department of Chemistry in association with IQAC on 20/03/2023

- 9. Member, Organising Committee of the Two National Seminar, NCAFM 2023)as a part of ARCSSCAL held on 23 and 24<sup>th</sup> March 2023, Organized by the undergraduate Departments of Physics , Chemistry and Mathematics in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.
- 10. Convener- of Field Trip of B.Sc. Chemistry students to CSIR-NIIST, Trivandrum on 18-03-2023

# 2. Dr Suprabha S

#### **Details of participation in seminars/ Refresher course**

- Attended Refresher Course in Materials Science, for University/College teachers conducted by the UGC-Human Resource Development Centre, University of Kerala, sponsored by the University Grants Commission. from 29.07.2022 to 11.08.2022
- 2. Participated and Presented a paper in the Two Day National Seminar, NCAFM 2023 as a part of ARCSSCAL held during 23-24 th March 2023, Organised by the under graduate Departments of Physics and Chemistry department in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.

#### Details of Programmes Coordinated and as organising committee member

- 1. Coordinator of the programme "Think Green" conducted by Department of Chemistry in association with IQAC on 08/06/2022 as a part of world environmental day celebration
- 2. Organizing committee member of the awareness programme on Well-water Purification using KMnO4 in the Panchayat of Kollayil on 15/07/2022

- 3. Organizing committee member of the programme Value added course on Yoga and Life skills conducted by Dept. of Chemistry& Community health activity club in association with IQAC from 22/07/2022 to 29/07/2022
- 4. Coordinator of the programme Oral Presentation contest on the topic Nobel Laureates in Chemistry-2021 conducted by Department of Chemistry in association with IQAC on 22-08-2022
- 5. Organizing committee member in Oral presentation competition conducted by Department of Chemistry in association with IQAC on 27/09/2022 in connection with World Ozone day Observance
- 6. Coordinator of the programme "Training programme for PG Entrance Exams (JAM,IISER,NIT,Central Universities) conducted by Department of Chemistry in connection with IQAC on 27/10/2022
- 7. Organising committee member of the programme Global Science for Global well being conducted by Science club and Department of Chemistry in association with IQAC on 06/03/2023
- 8. Coordinator of the programme Examination Guidance Session for First semester students conducted by Science club and Department of Chemistry in association with IQAC on 11/03/2023
- 9. Coordinator of the invited talk on the topic "Intellectual Property Right, A Brief Overview" conducted by Department of Chemistry in association with IQAC on 20/03/2023
- 10. Coordinator of Department Merit Day conducted by Department of Chemistry in association with IQAC on 20/03/2023

#### Other Role

- 1. General Coordinator, CBCSS Clubs, VTMNSS College, Dhanuvachapuram, for the Academic year 2022-23
- 2. Member in Science club, Calendar committee, MIS Committee. Academic committee and in Committee for Disabled and Elderly Persons, Technical committee
- 3. Coordinator in the in the Two National Seminar, NCAFM 2023)as a part of ARCSSCAL held on 23 and 24<sup>th</sup> March 2023, Organized by the undergraduate Departments of Physics, Chemistry and Mathematics in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.

## 3. Dr Bindu P. Nair

#### **Details of participation in seminars/ Refresher course**

- 1. Attended Refresher Course on Student Counselling and Mentoring, for University/College teachers conducted by the UGC-Human Resource Development Centre, University of Kerala, sponsored by the University Grants Commission from 31-01-2023 to 06-02-2023.
- 2. Participated and Presented a paper in the Two Day National Seminar, NCAFM 2023 as a part of ARCSSCAL held during 23-24 <sup>th</sup> March 2023, Organized by the under graduate Departments of Physics and Chemistry department in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.
- 3. Participated in the IP Awareness/Training program conducted by National Intellectual Property Awareness Mission on 08-03-2023.

#### Details of Programmes Coordinated and as organizing committee member

- 1. Coordinator of the programme Poster Competition as part of Independence Day Celebration conducted by Department of Chemistry in association with IQAC in August 2022.
- 2. Coordinated the awareness programme on Well-water Purification using KMnO4 in Kollayil Panchayat on 15/07/2022
- 3. Accompanying faculty, students' study tour and Industry Visit of B.Sc. final year students during 24-11-2022 to 28-11-2022.
- 4. Accompanying Faculty, Field Trip of B.Sc. Chemistry students to CSIR-NIIST, Trivandrum on 18-03-2023.
- 5. Coordinator of the Awareness Talk on Educational and Professional Opportunities for SC/ST/OBC/Minority Students, conducted by SC/ST/OBC/Minority cell on 27-05-2023.
- 6. Organizing committee member of the programme Value added course on Yoga and Life skills conducted by Dept. of Chemistry& Community health activity club in association with IQAC from 22/07/2022 to 29/07/2022
- 7. Member, Organizing committee of the programme Oral Presentation contest on the topic Nobel Laureates in Chemistry-2021 conducted by Department of Chemistry in association with IQAC on 22-08-2022.
- 8. Organizing committee member in Oral presentation competition conducted by Department of Chemistry in association with IQAC on 27/09/2022 in connection with World Ozone day Observance.
- 9. Member, organizing committee of the programme "Training programme for PG Entrance Exams (JAM,IISER,NIT,Central Universities) conducted by Department of Chemistry in connection with IQAC on 27/10/2022

- 10. Organising committee member of the programme Global Science for Global well being conducted by Science club and Department of Chemistry in association with IQAC on 06/03/2023.
- 11. Member, organising committee of the invited talk on the topic "Intellectual Property Right, A Brief Overview" conducted by Department of Chemistry in association with IQAC on 20/03/2023
- 12. Member, Organising Committee of the Two National Seminar, NCAFM 2023)as a part of ARCSSCAL held on 23 and 24<sup>th</sup> March 2023, Organized by the undergraduate Departments of Physics , Chemistry and Mathematics in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.

# 5. Ms.Manju M.J.

#### Details of participation in seminars/ Refresher course

1. Attended a 4-Week Faculty Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education" from 20 July- 18 August, 2022 and obtained Grade **A**+ organized by Teaching Learning Centre, Ramanujan College, University of Delhi under the aegis of Ministry Of Education, Pandit Madan Malaviya National Mission on Teachers and Teaching

## Details of Programmes Coordinated and as organising committee member

- 1. Organizing committee member of the programme Poster Competition as part of Independence Day Celebration conducted by Department of Chemistry in association with IQAC in August 2022.
- 2. Organizing committee member of the awareness programme on Well-water Purification using KMnO4 in Kollayil Panchayat on 15/07/2022

- 3. Accompanying faculty, students' study tour and Industry Visit of B.Sc. final year students during 24-11-2022 to 28-11-2022.
- 4. Organising committee member of Field Trip of B.Sc. Chemistry students to CSIR-NIIST, Trivandrum on 18-03-2023.
- 5. Organising committee member of the programme Value added course on Yoga and Life skills conducted by Dept. of Chemistry & Community health activity club in association with IQAC from 22/07/2022 to 29/07/2022
- 6. Organising committee member of the programme Oral Presentation contest on the topic Nobel Laureates in Chemistry-2021 conducted by Department of Chemistry in association with IQAC on 22-08-2022.
- 7.Coordinator of Oral presentation competition conducted by Department of Chemistry in association with IQAC on 27/09/2022 in connection with World Ozone day Observance.
- 8. Organizing committee member of the programme "Training programme for PG Entrance Exams (JAM, IISER, NIT, Central Universities) conducted by Department of Chemistry in connection with IQAC on 27/10/2022
- 9. Organising committee member of the programme Global Science for Global well being conducted by Science club and Department of Chemistry in association with IQAC on 06/03/2023.
- 10.Organising committee member of the invited talk on the topic "Intellectual Property Right , A Brief Overview" conducted by Department of Chemistry in association with IQAC on 20/03/2023
- 11. Organising committee member of Department Merit Day conducted by Department of Chemistry in association with IQAC on 20/03/2023

- 12. Organising committee member of the Two National Seminar, NCAFM 2023)as a part of ARCSSCAL held on 23 and 24<sup>th</sup> March 2023, Organized by the undergraduate Departments of Physics , Chemistry and Mathematics in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram.
- 13. Coordinator of Guidance class on career and courses after BSc Chemistry organized by department of chemistry on google meet held on May 30, 2023

# **Annual Report 2021 – 22**

#### **Courses offered**

- 1. Core course– BSc Chemistry
- 2. Complementary courses—Chemistry courses to BSc Physics, Botany and Zoology
- 3. Open course Essentials of Chemistry (Offered to S5 students from other departments)
- 4. Elective course Polymer Chemistry (*Offered to S6 students pursuing BSc Chemistry*)

**Annual student intake** – 38

Students admitted to first year during 2021 - 22 – 36

**Demand ratio** (2021 - 22) - 1615

Total number of boys (all batches) –26

Total number of girls (all batches) -87

Total number of differently abled students (all batches) – Nil

**Total number of students from other states** – one

**Total number of students - 113** 

**Number of full-time teaching posts**– 4 (one post vacant)

Students to full-time teacher ratio – 28.25

# Faculty, staff and student details

## **Faculty**

Sl. No.	Name	Designation	
1	Sreeja T G	Assistant Professor & Head (from	
		05.07.21 AN)	
2	Dr. Suprabha S	Assistant Professor	
3	Dr. Nitha L P	Assistant Professor	
4	Manju M J	Assistant Professor	
5	Dr.Lakshmi C S Nair	Guest faculty (joined on 01.11.2021 FN)	
		Assistant Professor & Head	
<b>Dr. Ratheesh Kumar V K</b> (transferred to MGC on 05.0		(transferred to MGC on 05.07.21)	

#### **Non-teaching staff**

Sl. No.	Name	Designation
1	Dhanya	Laboratory Assistant

# **Department Level Committees**

#### **Course Coordinators** (for core courses)

Sl No	Batch	Name

1	3 <sup>rd</sup> year (Sem 5 & 6)	Dr. Suprabha S
2	2 <sup>nd</sup> year (Sem 3 & 4)	Dr. Nitha LP
3	1st year (Sem 1 & 2)	Manju M J

## Faculty Advisors (for complementary courses)

Sl. No.	Batch	Name	
1	I B Sc Physics (Sem 1 & 2)	Manju M J	
2	I B Sc Botany (Sem 1 & 2)	Manju M J	
3	I B Sc Zoology (Sem 1 & 2)	Dr. Nitha L P	
4	II B Sc Physics (Sem 3 & 4)	Dr. Suprabha S	
5	II B Sc Botany (Sem 3 & 4)	Dr. Nitha L P	
6	II B Sc Zoology (Sem 3 & 4)	Dr. Suprabha S	

# **Faculty Members in College Level Administrative Committees**

Sl. No.	Name of the faculty member	Administrative assignment	
1.	Sreeja T G	Convener- Community Health activity Club, Member-NAAC steering committee, Health education club, Debate club, Purchase committee, Open course committee, Library committee, College Level Monitoring Committee, UG Admission Committee	
2.	Dr. Suprabha S	General Co-ordinator- CBCSS Clubs , Member Science club, Academic committee and in Committee for Disabled and Elderly Persons	
3.	Dr. Nitha L P	Convener- SC/ST Minority Cell , Convener-Equal Opportunity Cell	
4.	Manju M J	Science Club Coordinator	

Student details 2021 – 22

#### **Department Level Activities**

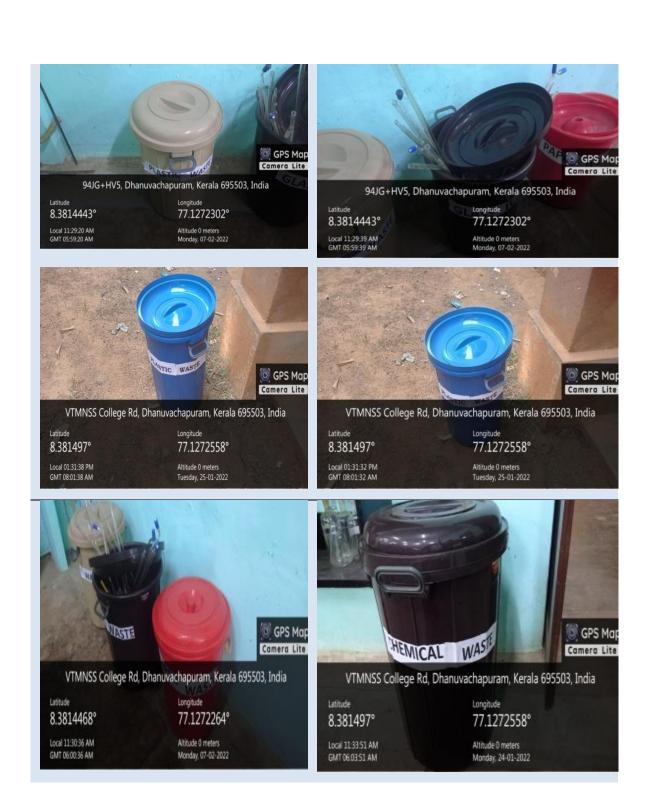
#### **Department Newsletter – Chemphile**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish newsletter summarizing our activities during each academic year. This year's name of the newsletter was suggested by one of our students Ms Sreedevi L K. Head of the Department Ms.Sreeja T G is the staff editor of this year's department newsletter. Mr. Sathish and Ms Sreedevi L K (S6 Chemistry students) are the student editors.

#### Go Green Campaign

Our department has started a green initiative in the name *Go Green* campaign from the academic year 2019-2020. It primarily aims at making the students aware about the need for keeping our environment clean and also to make effective steps in the scientific disposal of waste materials. In line with the objectives of the campaign, department level activities were conducted in strict adherence to green protocols so as to ensure minimal production of waste along with its proper disposal. Various initiatives under the campaign is coordinated by Dr.Suprabha S.

- As part of green initiative department place several waste bins to collect different types of wastes. One big bin was place in front of the department to collect the plastic wastes. Also placed three bins inside the Chemistry laboratory to collect chemical wastes, broken glass and paper wastes separately. Plastic wastes collected handed over to recycling unit of Neyyatinkara municipality. Chemical wastes are buried under huge pits after neutralization.
- Conducted a Speech Competition for students, in connection with World Nature Conservation Day 2021, and as a part of "Go Green Campaign" by Department of Chemistry in collaboration with IQAC.
- Also students make a video of planting trees by staff and students of Chemistry department as part of *plant a tree campaign* on the theme *restore our green earth* and played the video screening in World Environments day Celebrations.



# **Achievements**

## Academic

#### **Student Progression to Higher Studies**

For the 2021 – 22 pass-out batch, out of the 24 students who completed the course successfully, 8 secured admission to higher studies. Details of students who secured admission for higher course at various institutions are given below.

Sl No.	Name of student enrolling into higher education	Name of institution joined	Name of programme admitted to
1	Athul B K	IIT PALAKKAD	MSc
2	Bharath B S	Malankara Catholic College,	MSc
3	Kavya M K	MG College, TVPM	MSc
4	Athira SS	Malankara Catholic College,	MSc
5	Arathy Prathap S	Govt Womens College, Tvpm	MSc
6	Nithya S S	Christian College, Kattakkada	MSc
7	Sreedivya V S	Grace College Of Education	BED
8	Anuja F Lawrance	Grace College Of Education	BED

# **Student achievements**



Sreedevi L K (III DC Chemistry) qualified IIT Joint Admission Test for Masters 2022 with all India rank 1256 organized by IIT Rourkela



Vishnupriya (II DC Chemistry) posted as postal assistant in postal department, Govt. of India



Akshara P S( I DC Chemistry) got second prize in Hindi poetry writing in Kerala University Union Youth Festival 2022

Akshay M M (III DC) posted as MTS in postal department, Govt. of India

# Alumni



Athul B K (2018-20 batch) qualified IIT Joint
Admission Test for Masters 2021 and got
admission for MSc Chemistry in IIT,
Palakkadu



Sivadath H Suresh (2018-20 batch) got selection for OTA training for the post of Commissioned Officer in Indian Army



Japapriya V G (2017-19 batch) posted as LD clerk in Animal Husbandry Department by Kerala PSC on 25.09,2021

## Student participation in various competitions

- 1. Sreedevi L K, ARCHA. S. R, Sherin.S.H (III DC) participated and got first prize in Explora science exhibition organised by physics department.
- 2. Archana V N(II DC) got1st Prize in sudoku competition conducted by Mathematics department
- 3. Abhirami, I BSc Chemistry (1<sup>st</sup> prize) ,Archana, I BSc Chemistry (2<sup>nd</sup> prize), Alfa, I BSc Chemistry (3<sup>rd</sup> prize) are the winners of online Speech Competition for students ,In connection with World Nature Conservation Day 2021, and as a part of "Go Green Campaign" by Department of Chemistry in collaboration with IQAC
- 4. Sidharth Chandran (II DC) participated in science quiz competition organised by department of chemistry as part of science day

#### College Youth Festival and Competitions

- 1. ARCHA. S. R participated and got1st Prize in Kavitharachana Malayalam in College Youth festival
- 2. Sherin.S.H (III DC) participated and got second prize in Malayalam essay writing competition in College Youth festival
- 3. Sidharth Chandran(II DC) participated in got Ist prize in Hindi story writing in മഞ്ജീരം kalolsavam conducted on 25 th March 2022
- 4.Sarang.s.kumar, Sivanandhu S B, Sradha and Aswathi B S,Chandana Nair , Naveen A M , Niranjan (I DC) participated and got first price in vanjippattu competition at college arts day
- 5.Keerthana S J ,Anjali R P, Nayana Vinod, Mehsana F ,Gopika M S .Chandana J Nair and Greeshma (I DC) got I st prize in Patriotic song മത്ജീരം kalolsavam conducted on 25 th March 2022

- 6. Keerthana S J, Sradha , Anjali R P, Aswathi B S,Amrutha SA (I DC) got Second prize in Folk Song 2000 2000 kalolsavam conducted on 25 th March 2022
- 7. Anjali R P (I DC) participated and got first prize in Malayalam recitation at college youth festival
- 5. Sradha (IDC) participated and got second prize in malayalam essay writing, and malayalam elocution in മഞ്ജീരം kalolsavam conducted on 25 th March 2022
- 6. Keerthana. S J(I DC) got first prize in Classical Music and Sanskrit recitation in മഞ്ജീരം kalolsavam conducted on 25 th March 2022



Student achievements in sports

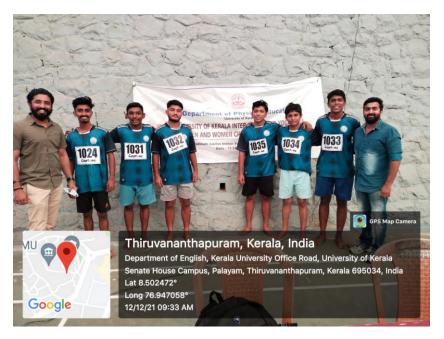
- 1.Akshay Krishna.S (III DC) won Inter collegiate Fencing Men's Epee Team with Gold Medal, Sabre Individual with Silver medal and Sabre Team with Bronze Organized by -University of Kerala
- 2.Bindhuja G Nath (III DC) won Inter collegiate Fencing Woman sabre team with gold medal, foil team with silver medal organised by university of Kerala and Taekwondo Thiruvananthapuram district Olympic Games, senior Girls Weight Category Under 68kg with silver medal.

- 3.Gokul. J (II DC) won inter collegiate yogasana men and women championship 2021-2022 on 12/12/21 by University of Kerala and got selection in Kerala university team.
- 4.Ancy A S (I DC) Inter college Soft Ball women- Postion 4 Runners up oraganised by university of Kerala, Inter college ball badminton women's Organized by Nilamel Base ball association, Position 2 Runner's up by association of Inter college kabaddi women's Organised by VTMNSS college Dhanuvachapuram
- 5.Reshma R S (IDC) Inter college Soft Ball women- Position 4 Runners up oraganised by university of Kerala, Position 2 Runner's up in Base ball oraganised by association university of Kerala
- 6.Vishnu. V. K (I DC)- Inter college Soft Ball men's Position 3 Runner's up Organized by university of Kerala, Inter college cricket men's Position 3 Runner's up Organized by university of Kerala, Base ball association Position 1 Runner's up Organized by association Selection in the Trivandrum district Team



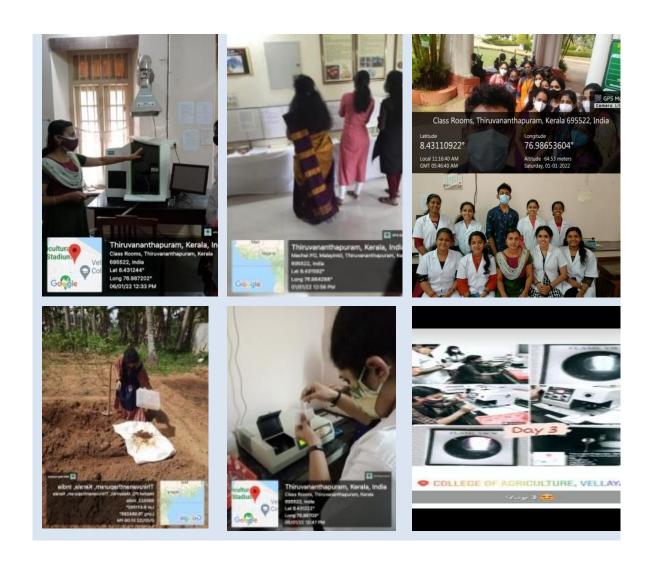






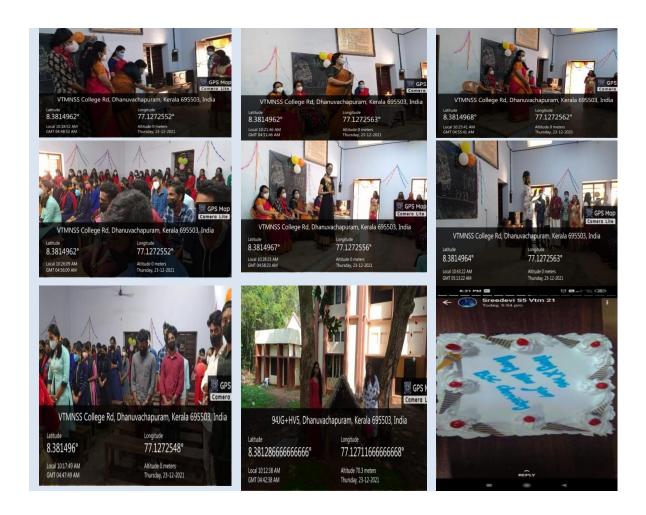
Students project at College of Agriculture, Vellayani

As part of BSc project, 10 students of our department visited College of Agriculture, Vellayani and completed two project works. All the laboratory characterization was done in Soil Chemistry Department of the College from I st to 15th January 2022. They worked under the guidance of Dr.Rani, HoD of Soil Chemistry Department and Dr.Aparna ,Associate Professor of Soil Chemistry Department. Statistical assistance of the project was provided by Dr.Pratheesh P Gopinath, Assistant Professor in Agricultural Statistics Department of the college. Dr.Suprabha from our college coordinated and completed the project work. Title of the project is "Analysis of soil samples for its Phisico-Chemical parameters from Perumkadavila and Parassala block, Trivandrum".



## Fresher's day and Xmas Celebrations

Fresher's day and Xmas Celebrations of the Department took place on 23<sup>rd</sup> December 2021. Second and third year students gave warm welcome to new comers. The function was inaugurated by Mrs.Sreeja T G, HoD Chemistry and all other teachers felicitate the function. First year students introduced themselves and some cultural activities of students were also conducted. Also students made Xmas Crib and Xmas cake was cut by students.



## Study tour for final year students

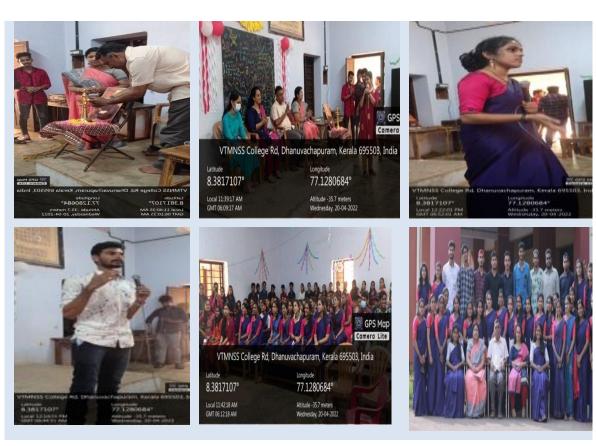
As part of syllabus, final year students visited Mysore silks and sandals in this academic year. The study tour was from 21<sup>st</sup> to 23<sup>rd</sup> March 2022 and journey started from college campus. Dr Suprabha guided students and 37 students went for the tour. The study tour was with the written permission of parents and it strictly followed the COVID19 protocols.





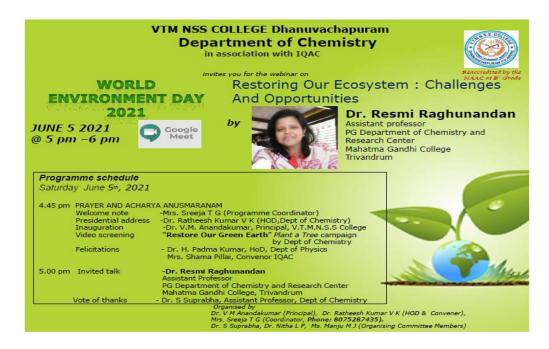
Farewell function of S6 students

The sent off of final year students took place on 23<sup>rd</sup> April 2022, 11 am at Department. The official sentoff programme was inaugurated by College Principal Dr. V M Anandakumar. All teachers of the department gave wishes to the outgoing students. Megha Sunil of second year Chemistry welcome all and Devadarsana of second year Chemistry anchored the programme. The outgoing students shared their three years experience with all of us .Students engaged in cultural activities. Also students arranged delicious food to all of us. A group photo session was also arranged at the College portico.

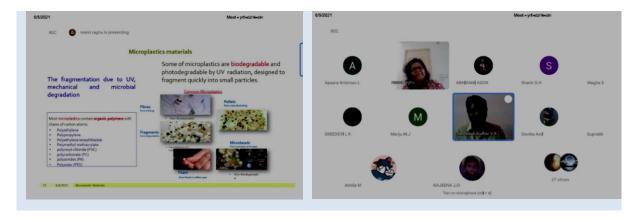


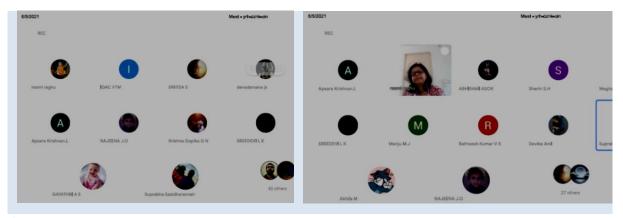
## 1. World environment day

As part of world environment day, we have conducted an online programme.



The programme was inaugurated on 5<sup>th</sup> June 2021 at 5 pm by the Principal Dr. V M Anandakumar. Dr Resmi Raghunandan (Assistant Professor, Dept of chemistry, M G College, Thiruvananthapuram) delivered the invited talk on "**Restoring our Ecosystem, Challenges and Oppertunities**". Also played the video screening of *restore our green earth*, as part of *plant a tree campaign* by the department. The online programme was attended by 94 participants and the programme was coordinated by Sreeja T G. Dr. Suprabha S expressed the vote of thanks.





**Outcome**: The programme was found to be very useful for the students and informative. Micro plastics and its bad effects was discussed. The students Abhirami Asok, Sreedevi L K and many other students interacted with resource person. Dr. Resmi Raghunandan highlighted that *the promise of restoration of our ecosystem lies within us*.

## 2. Reading Day 2021

As part of the celebrations of reading day 2021, we have organized an online programme for students to introduce their books of interest under the name *PusthakaParichayam*.

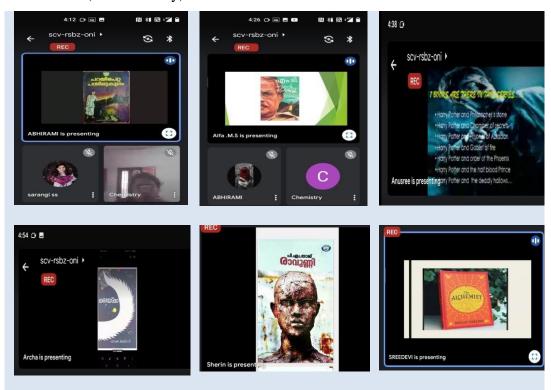


The online session conducted on 27/06/2021 started with introductory remarks from the programme coordinator Sreeja T G followed by a reading day message from Dr Ratheesh Kumar V K, Head, Department of Chemistry. Six students from various semesters briefed the contents of different books of their interest. Each presentation was followed by active discussion from the students as well as faculty members. The

programme clearly reflected the role of reading in acquiring knowledge as well as for self-motivation. Based on the student feedback as well as on the successful outcome of our programme, our department has decided to start a reading club for our students. The reading club is expected to arrange frequent sessions to introduce and review books of general interest by famous authors. The department will also make initiatives to widen the facilities available in the department library to assist the activities of the reading club. The session ended with concluding remarks from Dr. Nitha L P.

#### Student participants for the presentation:

- 1. Abhirami Asok S (S2 Chemistry)
- 2. Anusree C S (S2 Chemistry)
- 3. Alfa M S (S2 Chemistry)
- 4. Archa S R (S5 Chemistry)
- 5. Sreedevi L K (S5 Chemistry)
- 6. Sherin S H (S5 Chemistry)



**Outcome**: The programme helps to promote a culture of reading to inculcate the habit of reading and promote book-mindedness among students. All 6 participants actively

participate in the programme. It increased reading stamina, enhanced motivation to read, better attainment of reading skills, boosted student morale etc.

## **3.World Nature Conservation Day**

In connection with World Nature Conservation Day 2021, and as a part of "Go Green Campaign", Department of Chemistry in collaboration with IQAC organised an online Speech Competition for students on July 31, 2021 at 4 pm and the topic of competition was *Impact Of Current Activities Towards Conservation Of Nature*. Registration link used is



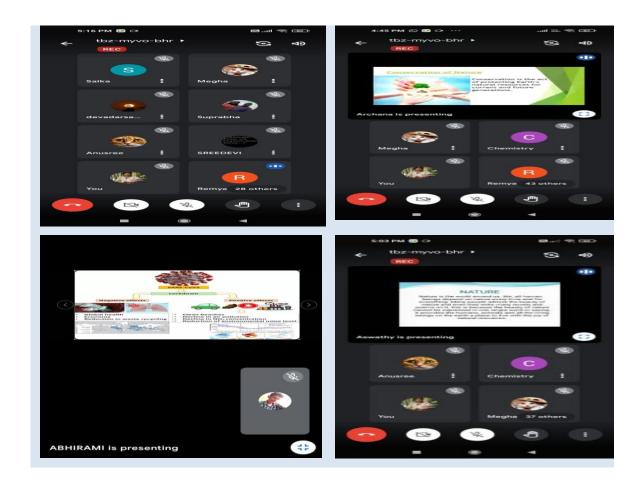


47 participants attended the programme. The programme was coordinated by Dr S Suprabha. Megha sunil anchored the program. Principal Dr. V M Anandakumar gave presidential address and IQAC coordinator shama pillai gave falicitation. Dr.Remya, Assistant Professor and Head, Department of Zoology, N S S College Nilamel was invited to judge the presentations and the winners were

Abhirami, I BSc Chemistry (1st prize)

Archana, I BSc Chemistry (2<sup>nd</sup> prize)

Alfa, III BSc Chemistry (3<sup>rd</sup> prize)

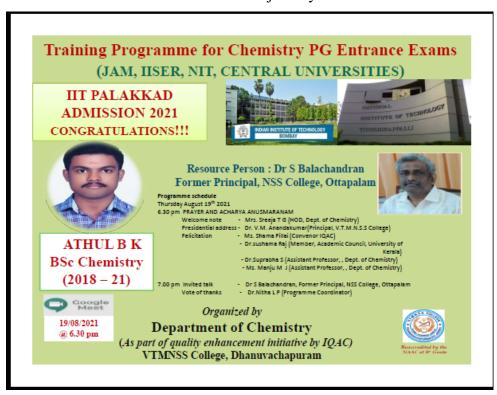


**Outcome**: The programme helps to demonstrate the ability to accomplish communicative goals. Programme helped to identify effective design, development, and delivery of speaking skills in students. All speakers emphasize and strengthen the link between the conservation of natural ecosystems and human development.

# 4. Training Programme for Chemistry PG entrance exams (JAM, IISER, NIT, Central Universities)

Based on the student feedback as well as from the suggestions received from IQAC, our department started an online coaching session for JAM and other PG entrance examinations. The sessions were given to students who expressed their willingness to appear for the entrance examinations. The official inauguration of the programme was conducted on 15<sup>th</sup> August 2020 by the Principal Dr. V M Anandakumar. On continuation with this, this year's classes were started with the introduction class of Dr.S Balachandran on 19<sup>th</sup> August 2021 at 6.30 pm. Dr. V M Anandakumar , Principal gave the presidential address .

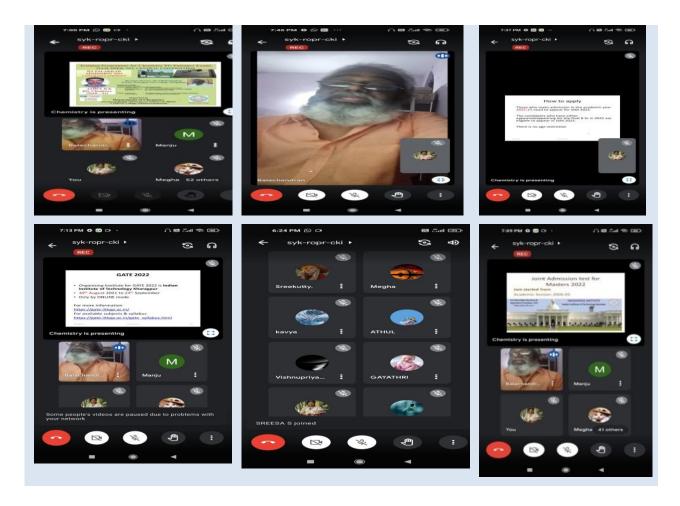
Athul B K (2018-20 batch) qualified IIT Joint Admission Test for Masters 2021 and got admission for MSc Chemistry in IIT, Palakkadu was honored in this programme and also he shared his journey to reach IIT.



Fourty five students from second- and third-year degree programme joined for the class and online – sessions were handled by the faculty members of the department. The training programme is coordinated by Dr. Nitha L P.

**Outcome**: One of our students Athul BK qualified JAM2021 was a great achievement to the department. This programme was initiated in response to the student feedback and they received it very well. Several students attended the training sessions and faculty members are also very enthusiastic to help the students. The sessions are scheduled outside the regular

class hours.



## 5. World Ozone Day

Our department observed international ozone day. In connection with the programme, we have conducted an online logo making competition on the topic *save ozone save life* and four minute video clip contest on the topic *Ozone for Life* among students. Many

students participated in the contests and the programme was coordinated by Ms.Manju M J.



The winners of the Logo making contest were

Jayalekshmi V V, S5 English (1st prize)

J S Devadarsana, S2 Chemistry (2<sup>nd</sup> prize)

And winners of four minute video clip contest were

Abhirami Asok (1<sup>st</sup> prize)

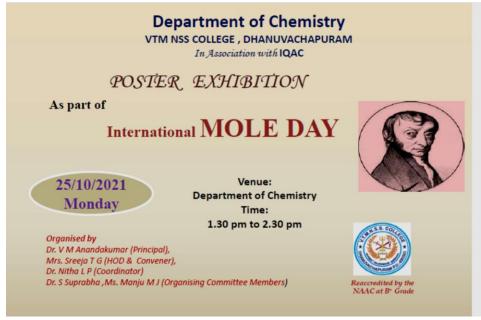
Anusree C S (2 nd prize)

**Outcome**: The programme was well received by the students. The various competitions provided students an opportunity to have an in-depth knowledge on various aspects of ozone in our environment along with developing presentation skills. Through this programme, students spent some time to think the importance of Ozone Umbrella.

## 7. International Mole Day Celebration

As part of the celebration of international mole day, our department coordinated an

online poster exhibition for students based on the Mole Day theme. The programme was conducted in association with IQAC and coordinated by Dr Nitha L P











Twenty four students registered and presented their posters for the programme conducted on 25<sup>th</sup> October 2021 and they were given guidelines regarding the preparation of their poster. All students from Department watched the Poster exhibition and mentioned their remarks.

**Outcome**: This programme was intended to explore the drawing skills and creativity of students along with understanding the importance of International Mole day. As the exhibition was conducted for the students from various batches, they also got ample opportunity to discuss among themselves in the preparation of their poster. These types of programmes are expected to enhance the skills and ability of students while working in groups

## 8. Webinar on How to create a successful career in research

Research Committee in association with Department of Chemistry, Physics and IQAC organized a webinar on the topic *How to create a successful career in research*. The programme was on 27<sup>th</sup> November 2021, 11 am and the resource person is Dr.Rakhi R B.



Research Committee in association with Department of Physics and Chemistry and IQAC organise

A Webinar on the topic

"How to create a successful career in research"

Platform: Google meet Date: 27/11/2021 Time: 11:00 AM



## About the speaker

Dr. Rakhi received her Ph.D. in Physics with the best thesis award, from the Indian Institute of Technology Madras (IITM). Chemai in July 2009 for the work done in the area of Synthesis and applications of earlien based nanocomposites' under the Joint supervision of Prof. S. Ramaprabhu and Prof. K. Schupathi. Subsequently, she worked as a Pustdoctoral Research Fellow (March 2000 October 2013) at the Functional NanoMaterials and Devices Group lead by Prof. Husam N Alshareef, King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabhi. Later, she was associated with the Chemical Sciences and Technology Division of CSIR-NIST. Thirwamanthappurum as a Ramanujan fellow (February 2016) June 2019). Dr. Rakhi worked as a UCC-Assistant professor (June 2019 August 2021) under the UGC - FRP scheme at the Department of Physics, University of Kerala. In August 2021, she joined at the Materials Science and Technology Division of CSIR-NIST. Trivandrum as a Principal Scientist. Her current research internet include functional nanomaterials, nanocomposites, layered Materials, nanotechnology-enabled energy storage dwices (supercapacitors and hybrid devices), electrocatalysis, and electrochemical sensors, she is the recipient of the International SABIC postdoctoral fellowship award consecutively for 2013 Ind 2014. She has published More than 5700 elitations and has an h-index of 33.

PROGRAMME	SCHEDULE
Prayer	Ms. Gopika.G.S, 1# DC BSc Physics
Acharya anusmaranam	
Welcome address	Dr. V.N Praveen, Convenor Dept.of Physics
Presidential address	Dr.Bijini.B.R,HoD Dept.of Physics
Inaugural address	Dr.Anandakumar.V.M, Principal VTM NSS College
Felicitations	Ms.Shama Pillai, IQAC Convenor
	Ms.Sreeja.T.G HoD, Dept of Chemistry
Webinar	Dr.Rakhi .R.B NIIST , Thiruvananthapuram
Vote of thanks	Mr. Satheesh.R Dept.of Physics

Invitation	ORGANIZING	COMMITTEE
The Research Committee of our college is conducting a webinar on the topic How to create a successful career in research in collaboration with IQAC. Dept. of physics and Dept. of chemistry to create awareness among students about the opportunities in research field. Dr.Rakhi.R.B. Pincipal Scientist, Material Science and Technology Division, CSIR NIIST, Thiruvananthapuram is the resource person. This webinar will motivate	Chairman	Dr.Anandakumar, Principal VTM NSS College
	Convenor	Dr.V.N Praveen, Convenor Dept.of Physics
	Members	Dr.Bijini.B.R,Dr.Deepa.V, Mr.Satheesh.R Dept.of Physics
		Ms.Sreeja.T.G, Dr.Suprabha.S, Dr.Nitha.L.P, Ms.Manju.M, Dr.Lakshmi.C.S.Nair Dept.of Chemistry
students to pursue a career in research field.All are invited to the webinar.	IQAC Convenor	Ms.Shama Pillai IQAC Convenor
Convenor	Googla mast link : https://mast.googla.com/pkn-cuwx-kab	

Outcome: The programme helped students to know the immense research opportunities in physics and chemistry. Also cooperation of both Physics and Chemistry department became more fruitful. Students interacted and asked their doubts with the resource person.

# 9. Skill Development Programme in Soap making for teachers and students

We are living in a dangerously lethal and potent world amidst pollution, pandemic and anxiety, for the all the things uncertain. Our appearance, our thought systems, our body and even our personality is hampered with toxicity and artificial/synthetic agents through air, water, food, clothes, cosmetics, etc. As such we are bound to use environment friendly and toxin free products at little or no expense that requires our patience and an earnest desire to live a chemical free life, closer to nature. At this juncture, The Department of Chemistry in association with Naipunya 2021, (a Skill Development Programme, launched in the month of August 2021 as part of World Youth Skill Day) by IQAC, VTM NSS College, Dhanuvachapuram, organised an Additonal Skill Development Programme in Soap Making for our faculty members and students on 9<sup>th</sup> December 2021, at Seminar hall to enjoy the perks of an environment friendly, cost-

effective and healthy skin. Around 100 participants participated in this offline programme. The training programme was coordinated by Dr. Nitha L P.

#### VTM NSS COLLEGE, DHANUVACHAPURAM Thiruvananthapuram, Kerala 695503

Ph: 0471 2232240, E-mail: vtmntscollege@yahoo.in DEPARTMENT OF CHEMISTRY In association with

#### NAIPUNYA 2021 and IQAC

Additional Skill Development Programme for Teachers

### SOAP MAKING

Date: 09/12/2021 Time: 10:00am

Venue: seminar hall

Inaugural Session

Time : 10.00 am

Welcome Speech : Megha Sunil (II BSc Student)

Presidential Address : Dr. V M Anandakumar

(Principal, VTM NSS College)

Felicitation : Ms Shama Pillai (IQAC Convener)

Vote of thanks : J S Devadersana (II BSc Student)

Time : 10.30 am

Technical Session : Training on soap making

Resource Person : Murukan B

#### Dear teachers,

We are living in a dangerously lethal and potent world amidst pollution, pandemic and anxiety, for the all the things uncertain. Our appearance, our thought systems, our body and even our personality is hampered with toxicity and artificial/synthetic agents through air, water, food, clothes, cosmetics, etc. As such we are bound to use environment friendly and toxin free products at little or no expense that requires our patience and an earnest desire to live a chemical free life, closer to nature. At this juncture, The Department of Chemistry in association with Naipunya 2021, (a Skill Development Programme, launched in the month of August 2021 as part of World Youth Skill Day) by IQAC, VTM NSS College, Dhanuvachapuram, is organising an Additonal Skill Development Programme in Soap Making for our faculty members to enjoy the perks of an environment friendly, cost-effective and healthy skin. The one day programme aims to provide a sustainable, natural and efficacious method to develop home-made soaps and impart the newly acquired skills to our learners so that they can develop a sense of responsibility towards nature and support themselves through entrepreneurship.

#### Organising Committee:

Dr. V M Anandakumar (Principal), Ms Shama Pillai (IQAC Convener), Ms Sreeja T G (HoD & Convener), Dr Suprabha S, Dr Nitha L P (Programme Coordinator), Ms Manju M J, Dr Lakshmi C S Nair









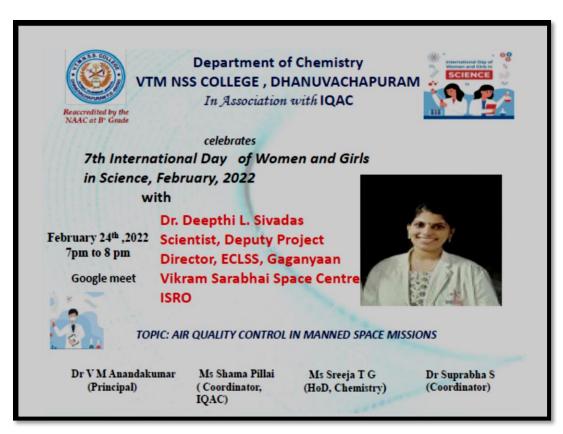


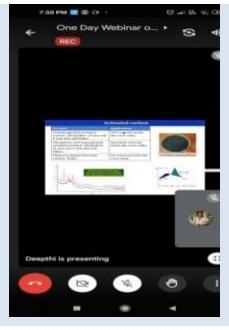


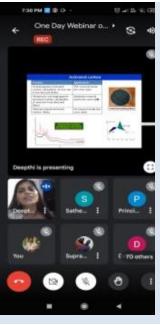
Outcome: The one day programme aims to provide a sustainable, natural and efficacious method to develop home-made soaps and impart the newly acquired skills to our learners so that they can develop a sense of responsibility towards nature and support themselves through entrepreneurship.

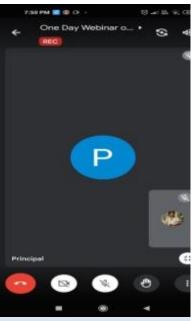
## 10. International Day of Women and Girls in Science

The International Day of Women and Girls in Science is the 11th day of February, by resolution of the United Nations General Assembly on 22 December 2015. The international day recognizes the critical role women and girls play in science and technology. As part of this day, the Department of chemistry organized an online invited talk on the topic *air quality control in manned space missions* on 24<sup>th</sup> February 2022 at 7 pm. The programme was inaugurated by the Principal Dr. V M Anandakumar The resource person was Dr. Deppthi L Sivadas, Scientist and Deputy Project Director, Gaganyaan, VSSC, ISRO.125 Participants joined in the webinar .Dr Suprabha S coordinated the webinar.





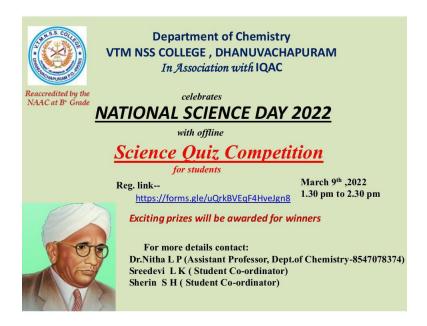






**Outcome**: International Day of Women and Girls in Science is an opportunity to celebrate women scientists and the meaningful contributions they make to research and discovery every day. It's a day to inspire future women scientists and consider ways to close the gender gap. The talk by resource person was very useful to students and they asked many doubts with her.

## 11. Celebration of National Science Day



As part of the celebration of National Science Day, our department organized an offline quiz competition for students. The programme was coordinated by Dr.Nitha L P and it was conducted in association with the college IQAC. Students were instructed with the

necessary guidelines for thequiz competition .Ms Sreedevi L K and Ms Sherin S H of S6 chemistry were the quiz masters. 22 team members participated in the `competition. Among `them, the four team were in the final round, the winners were

First prize

Vidya V S & Adwaitha J S (S4 Botany)

Socond prize

Anupama S & Renjini R S (S4 zoology)

Third prize

Pranav B P & Arya Krishnan (S4 Physics)















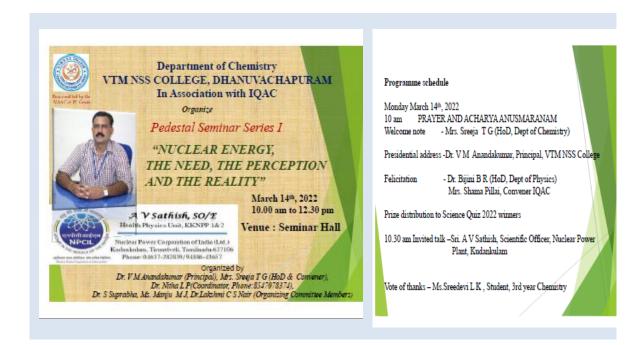






## 12. Pedestal Online Seminar

. As part of IQAC quality initiatives *Pedestal*, an annual inter-disciplinary seminar series, is organized in association with the departments of our college. This year, it was decided to conduct the seminar series in offline mode. We organized our seminar on 14th March 2022 at 10.00 am. The programme was inaugurated by the Principal Dr. V M Anandakumar and the prizes are awarded to the winners of Science day quiz competition. Speaker for our seminar was Mr.A V Sathish, Scientific Officer, Nuclear Power Plant, Koodamkulam. Resource person spoke about the *need*, *perception and reality of nuclear energy*.



Students expressed their queries during the discussion session and Resource person responded to the questions. The programme was coordinated by Dr.Nitha L P and attended by 100 participants.





**Outcome**: The programme was well received by all students and there is a very good interactive session also. This programme gave them an opportunity knows about the working of nuclear power plants. Students were aware by the environmental challenges, the increase in energy demand and the reality of nuclear energy.

## 13. International seminar ICRTPCM

Chemistry department became part of the International Conference on Recent Research Trends in Physics, Chemistry and Mathematics (ICRTPCM-2022) organized as part of Annual Research Conference on Science, Social Science, Commerce, Arts and Language (ARCSSCAL) 2022, by the Research Committee in association with IQAC. There were two international invited talks and 22 oral presentations on 24<sup>th</sup> and 25<sup>th</sup> March 2022.

#### **Important Dates**

Last date of submission of abstract : 18-03-2022 Acceptance of abstract: 21-03-2022 Submission of full paper: 23-03-2022

Abstract and paper should be sent to the e-mail id. icrtpcm2022@vtmnsscollege.ac.in

lease Click here to register https://forms.gle/WMkAjJ8RXXihQcic6

#### Correspondence

#### Dr. Deepa V

Co-ordinator, Department of Physics Contact No. 9495392837

#### Dr. Suprabha .S

Co-ordinator, Department of Chemistry Contact No. 9446615992

#### Deepa .D

Co-ordinator, Department of Mathematics Contact No. 8547383588

About the College

VTM NSS College, Dhanuvachapuram, the cornerstone of quality education to generations of learners from the remote areas of Southern Kerala, was established by the Nair Service Society in 1964, in commemoration of the bicentenary of the great freedom fighter Thalakulathu Velu Thampi Dalawa. The institution, affiliated to the University of Kerala, was re-accredited by NAAC with B+ Grade at CGPA 2.71 in 2018. The institution offers 11 Undergraduate programmes and 4 Postgraduate programmes, along with various clubs, committees and cells that work towards augmenting the efficacy of the academic community, holistically. An impartial and profound dissemination of knowledge with viable resources of learning bears the hallmark of eminence and perpetuity.

#### **Organizing Committee**

Dr. V.M. Anandakumar (Principal)

Ms. Shama Pillai (Co-ordinator, IQAC)

Dr. Bijini B.R (Co-ordinator, ARCSSCAL ad, Department of Physics)

Ms. Sreeja T.G(Head, Department of Chemistry)

Dr. Nitha L P (Co-ordinator, ICRTPCM)

Ms. Deepa .D (Head, Department of Mathematics)

Dr. Praveen.V.N

Dr. Deepa.V

Mr. Satheesh. R

Dr. Suprabha S

Ms. Maniu M.I

#### VTM NSS College

Dhanuvachapuram, Thiruvananthapuram (Accredited by NAAC with COPA 2.71 at B+ Grade) www.vtmnsscollege.ac.in

#### ARCSSCAL-2022

Annual Research Conference of Science. Social Science, Commerce Arts and Language)





International Conference on Recent Research Trends in Physics, Chemistry & Mathematics (ICRTPCM-2022)

2022 MARCH 24 - 26

Platform: Google Meet

https://meet.google.com/wec-jhyg-vkh

Organized by

Departments of Physics, Chemistry & Mathematics in Association with Research Committee & IQAC

#### Programme Schedule

al Conference on Recent Research Trends in Physics, Chemistry & Mathematics ICRTPCM 2022 Google Meet Link:

https://meet.google.com/wec-jhyg-vkh

#### **PHYSICS**

Day 1: 24/03/2022

Invited Talk 1: 10.00 am - 11.00 am **How Climate Models got so accurate** 

that they earned a Nobel Prize"
/elcome : Satheesh R
(Department of Physics,
VTM NSS College)
esource Person: Dr Ajay Mohan Raveendran
Senior Scientist.

Resource Person:

Center for Prototype Climate Modeling, NYU, Abu Dhabi Dr Deepa V

Vote of Thanks (Department of Physics, VTM NSS College)

**Oral Presentations** 

Dr V N Praveen (Department of Physics, VTM NSS College)

Day 2: 26/03/2022

Resource Person:

9.00 am

Invited Talk 2: 3.30 pm - 4.30 pm Density Functional Theory in Material

Research" Dr. V.N. Praveen

Welcome (Department of Physics, VTM NSS College)

Dr Assa Aravindh Nano & Molecular System

Nano & Molecular System Research Unit, University of Oulu, Finland Adarsha JM (Department of Physics, VTM NSS College) Vote of Thanks

Oral Presentations Dr Deepa V (Department of Physics, VTM NSS College) CHEMISTRY

Day 1: 24/03/2022 Invited Talk 3: 11.30 am - 12.30 pm Energy Landscape Study on

RNA molecules"

Manju M J

(Department of Chemistry, VTM NSS College)

Resource Person: Gayathri Sankar

Yusuf Hamied Yusuf Hamied
Department of Chemistry
University of Cambridge
Dr. Lekshmi C S Nair
(Department of Chemistry,
VTM NSS College)

Vote of Thanks

Day 2: 25/03/2022

Invited Talk 4: 11.00 am - 12.00 pm "Plasma surface engineering and natural fibres for

potential applications'

Welcome Ms Sreeja TG

Resource Person:

Ms Sreeja TG
(Department of Chemistry,
VTM NSS College)
Renjith Raman Pillai MS.ME.
Department of Material Science &
Engineering,
University of Alabama,
Birmingham, US
Dr Suprabha S

Vote of Thanks Dr Suprabha S

(Department of Chemistry, VTM NSS College)

1.30pm

Oral Presentations
Ms Manju M J
(Department of Chemistry,
VTM NSS College)

MATHEMATICS

Day 1: 25/03/2022

Invited Talk 5: 10.30 am - 11.30 am

"Domination Energy in Graphs"

Welcome

Deepa D (Department of Mathematics, VTM NSS College) Dr. M. Kamal Kumar

Resource Person :

Professor.

Department of Information Department of Information Technology- Mathematics, University of Technology and Applied Sciences, Muscat, Sultanate of Oman Afila AS

Vote of Thanks :

(Department of Mathematics,

VTM NSS College)

Day 2: 26/03/2022

1.30pm

Invited Talk 6: 11.30 am - 12.30 pm

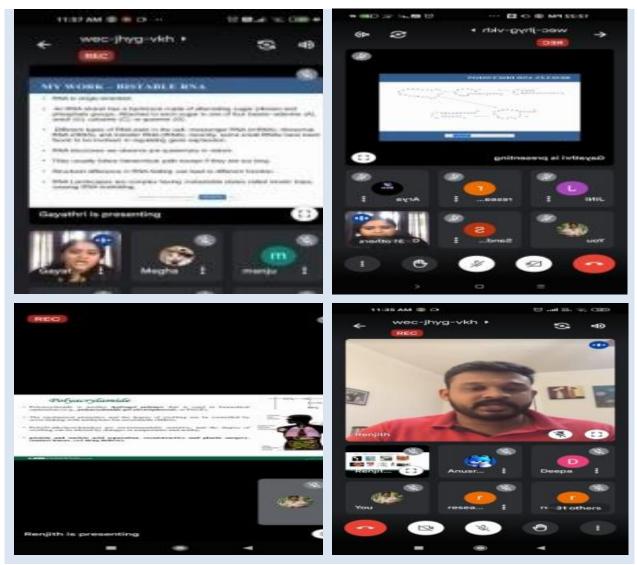
"Structure of regular semigroups"

Keerthi Chandran C (Department of Mathematics, VTM NSS College) Dr Azeef Muhammad P A Resource Person:

Center for Research in Mathematics

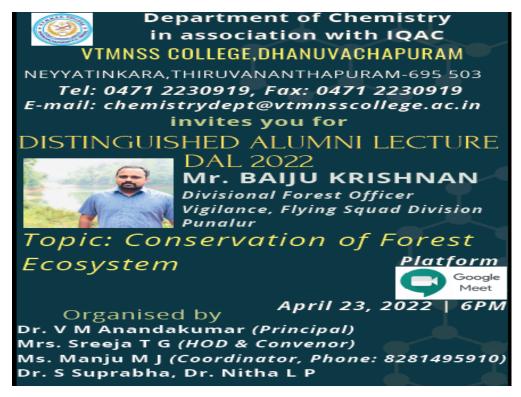
Center for Research in Mathe and Data Science, Western Sydney University, Australia Arya Ashok (Department of Mathematics, VTM NSS College) Oral Presentations Vote of Thanks

Deepa D (Departm ent of Mathematics. VTM NSS College)

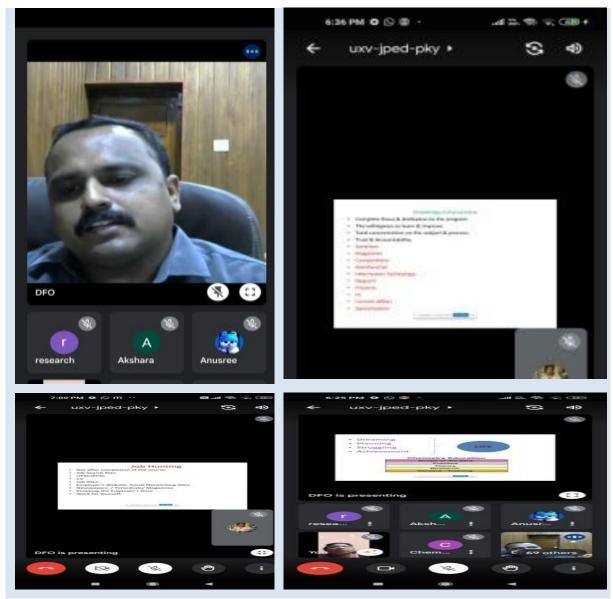


Outcome: The conference was gathering of group of people to share their research ideas and knowledge of specific techniques and topics in chemistry field. It helps both teachers and students to meet people from all around the world. It allowed all to nurture their brain and to be open to new ideas and concepts.

## 14. Distinguished Alumni Lecture (DAL)



As part of the qualitive enhancement approaches form IQAC, our department conducts annual DAL to offer a platform for our students to interact with eminent professionals graduated from the department. The programme also gives an opportunity for the department to recognize the achievements of its former students. This year DAL was conducted on 23<sup>rd</sup> April 2022 and our chief guest wasMr. Baiju Krishnan, Divitional Forest Officer. The programme was inaugurated by the College Principal Dr. V M Anandakumar and was well received by the students. The programme was coordinated by Ms.Manju M J.

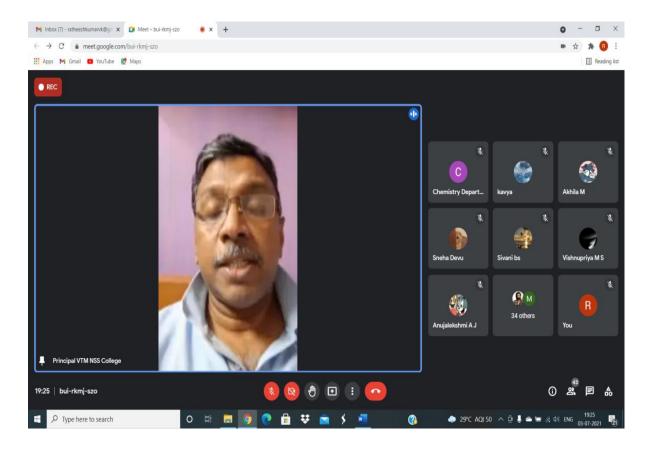


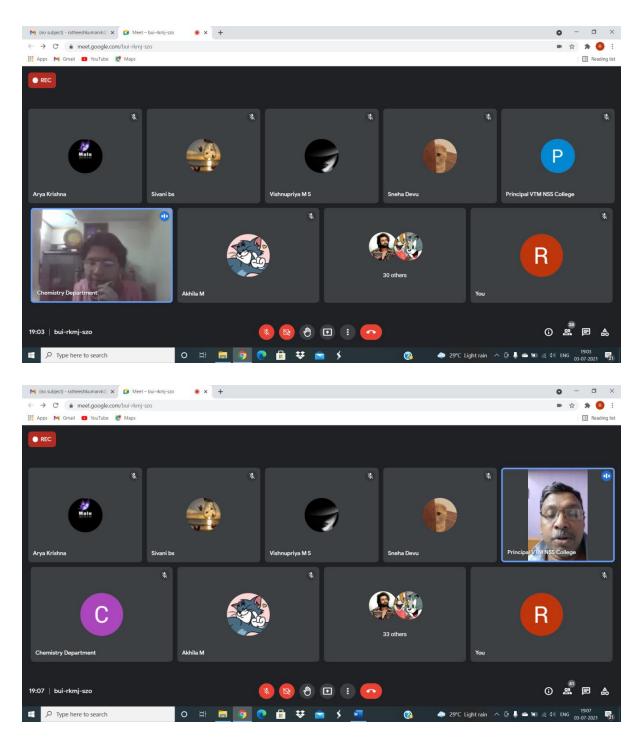
**Outcome:** Students got an opportunity to interact with successful professionals from the same institute. Also, the programme provides an opportunity for the department to recognize the former students who are successful in their life.

## **PTS** meetings

We have conducted Parent-Teacher-Student meeting of Second semester batch of our department in online mode and the gatherings were addressed by the college Principal on 05.06.2021 at 7pm. Parents and students shared their views and thoughts regarding the

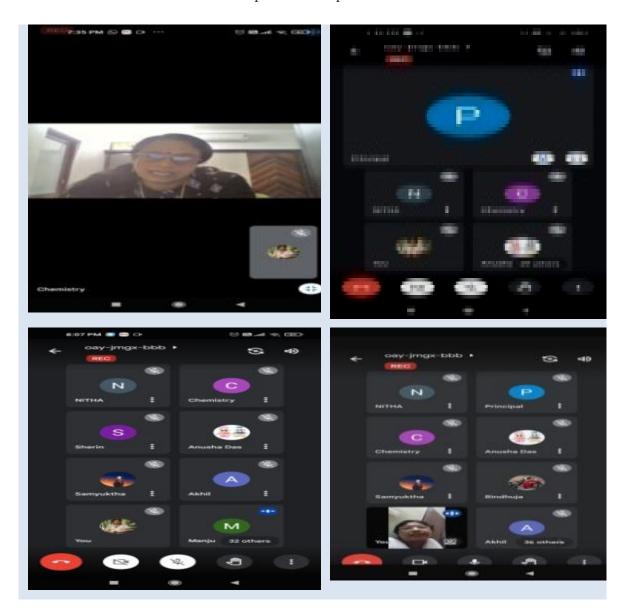
academic ambience of the department. Discussed about the upcoming S2 examination preparations. All of them expressed their concern about the shortcomings and difficulties of online mode of teaching adopted due to the pandemic situation. They emphasized the need for restoring offline classes as soon as the conditions become favorable. The principal addressed the concerns raised by parents and students. He also explained the situations which forced us to switch to the online mode of academic activities. He also briefed the activities undertaken by the college authorities in assisting the students to access online classes. Individual interaction of parents and students with their faculty advisors was also conducted.





For the final year batch (for S5 students), the PTS meetings were conducted on 1<sup>st</sup> October 2021. The meetings were conducted in Google meet platform. The meeting was to inform parents and students about the Reopening of college and offline classes. It was announced that classes will begin for students with half strength from 9.30 am to

1.30pm to ensure social distancing. Also it's important that precautions are taken both inside and outside the classroom to prevent the spread of COVID-19.



# **Publications**

## 1. Sreeja T G

**Sreeja T G** & Dr. Resmi Raghunandan, *Insilico Insight into the Association between Polycyclic Aromatic Hydrocarbon and Human Toll Like Receptor in Progression of Esophageal Carcinogenesis*, The Journal of the International Society for Polycyclic Aromatic Compounds.

#### **Oral Presentations**

1.Sreeja T G & Dr. Resmi Raghunandan, *Progression of Esophageal Carcinogenesis through Association of Human Toll Like Receptor With Polycyclic Aromatic Hydrocarbons—An Insilico Prediction*, Oral presentation in International Conference in Recent Advances in Chemical Sciences (online) organized by PG Department of Chemistry and Research Centre, MG College, Thiruvananthapuram on 10-11, March 2022.

2.Sreeja T G & Dr. Resmi Raghunandan, *Neurotoxic Inhibition of Human Acetyl Cholinesterase by Organophosphates - An Insilico Prediction*, Oral presentation in Three Day International Conference on Recent Research Trends in Physics, Chemistry and Mathematics (ICRTPCM) as part of ARCSSCAL 2022, jointly organised by the Undergraduate Departments of Physics, Chemistry and Mathematics in association with Research Committee and IQAC, VTM NSS College, Dhanuvachapuram from 24.03.2022 to 26.03.2022

**3.Dr S Suprabha** Participated and Presented a paper in theThree Day International E-conference(ICRTPCM-2022)as a part of ARCSSCAL held during 24-26<sup>th</sup> March 2022, Organised by the under graduate Departments of Physics , Chemistry and Mathematics in association with Research Committee and IQAC, VTMNSS College, Dhanuvachapuram

## **Social Organisations**

## Sreeja T G

**1.** Membership in Academy of Chemistry Teachers, Thiruvanathapuram, Kerala, Regn No. 774/91, Certificate No.: ACT/2021-22/076

## Participation in seminars/workshops/conferences/courses

## Mrs.Sreeja T G

- 1. Attended the Online Short term Course in Disaster Management for University/ College teachers conducted by the UGC-Human Resource Development Centre, University of Kerala, sponsored by the University Grants Commission from 22.02.2022 to 28.02.2022.
- 2. Successfully completed the 10-Day Hands-on Training on Advanced Molecular Docking during 16-26<sup>th</sup> October 2021 conducted by the Directorate of Research, SAFI Institute of Advanced Study ,Calicut,Kerala in association with SIAS Research Forum.
- 3. Participated in the Seven Day Workshop on DIY Art and Creativity as part of *Naipunya 2021*, a Skill Development Training Programme organised by the IQAC of VTM NSS College in association with the Department of Physics, from 15th July to 24th August 2021.
- 4. Attended La Fierté, 2021, the five day event organised by Women's study unit, Gender Justice Forum, Equal Opportunity Cell and NSS of VTM NSS College from the 22nd to the 26th of June, 2021.
- 5. Attended the International Webinar on "Supercapacitors", jointly organised by the Department of Physics, IQAC and Science Club of VTM NSS College, Dhanuvachapuram on 16/09/2021
- 6. Participated in the Webinar on "Nootithonnuru Varshathe British Bharanavum Adhunika Indiayum" organised by the Debate club in association with IQAC on 15th August 2021.
- 7. Participated in the Webinar *How to face a debate competition* on 17 <sup>th</sup> July 2021 organized by IQAC and Debate club of VTM NSS College, Dhanuvachapuram .

## Dr. S Suprabha

- Refresher Course on "Managing online classes and Co- creating MOOCS(Level 2)" from 02-16<sup>th</sup> June 2021, Organised by Teaching Learning Centre, Ramanujan College, University of Delhi, under aegis of Ministry of education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching
- Participated in Three days National Online FDP on ICT Tools for Effective Teaching Learning, from 8-10<sup>th</sup> June 2021, Organised by IQAC, Kamalanehru, Mahavidyalaya, Nagpur.
- 3. Participated in International E- Conference on Recent Advances in Chemical, Physical and Biological Sciences(RACPBS-2021) on 29-30<sup>th</sup> June 2021, Organised by, Department of Chemistry, Nabira, Mahavidyalaya, Katol and Association of Chemistry Teachers (ACT) C/o HomiBhava Centre for Science Education (TIFR) Mumbai.
- 4. Participated in La Fierte 2021: Celebrating Pride in Harmony, the five day event from 22<sup>nd</sup> -26<sup>th</sup> June 2021, Organised by IQAC in collaboration with womens study unit, Gender Justice forum, Equal opportunity cell and NSS, VTMNSS college, Dhanuvachapuram.
- 5. Refresher Course on "Chemistry-The Catalyst for Change" from 14-28<sup>th</sup> July 2021, Organised by Teaching Learning Centre, Ramanujan College, University of Delhi, under aegis of Ministry of education PanditMadan Mohan Malaviya National Mission on Teachers and Teaching
- 6. Participated in Virtual International Conference on Multifunctional Advanced Materials (VICMAM-2021) on 9<sup>th</sup>&10<sup>th</sup> August 2021, Organides by Department of Chemistry, JVM's Degree College in collaboration with Association of Chemistry Teachers(ACT).
- 7. Participated in the Webinar, CHEMSAFE-'21 on 27<sup>th</sup> November 2021, Organided by Post Gragduate Department and Research Centre of Chemistry, Sanatana Dharma College, Alappuzha, in connection with Platinum Jubilee- CHeMPLaTiNAm.
- 8. Participated and Presented a poster in the International E- conference on Sustainable and Futuristic Materials(SFM-2021) held during 29-30<sup>th</sup> November 2021, Organised by International Research Centre and Department of Chemistry Kalasalingam Academy of Research and Education, Krishnankoil, Department of Chemistry J M

- Patel Arts, Commerce and Science College, Bhandara and Department of Chemistry, Kamala Nehru Mahavidyalaya, Nagpur.
- 9. Participated in the UGC- Sponsored Live Online Refresher Course in Women's Studies and Women Empowerment(Multidisciplinary) conducted by the UGC-Human Resourse Development Centre, University of Kerala, Kariavattom, Trivandrum, from 21-01-2022 to 03-02-2022.
- 10. Participated in Two weeks Long Programme Conducted as part of 7<sup>th</sup> International Day of Women and Girls in Science from 11-28<sup>th</sup> February 2022, Organised by the undergraduate Department of Physics in association with IQAC and Science club, VTMNSS College, Dhanuvachapuram.

# **Annual Report 2020 – 21**

#### Courses offered

**Core course**– BSc Chemistry

**Complementary courses**— Chemistry courses to BSc Physics, Botany and Zoology

**Open course** – Essentials of Chemistry (*Offered to S5 students from other departments*)

**Elective course** – Polymer Chemistry (*Offered to S6 students pursuing BSc Chemistry*)

**Annual student intake** – 38

Students admitted to first year during 2020 - 21 - 38

**Demand ratio** (2020 - 21) - 1734

Total number of boys (all batches) -28

Total number of girls (all batches) -91

Total number of differently abled students (all batches) - Nil

**Total number of students from other states** – Nil

**Total number of students - 119** 

**Number of full-time teaching posts**– 5 (all posts are filled)

Students to full-time teacher ratio – 23.8

# **Department Level Committees**

**Course Coordinators** (for core courses)

Sl No	Batch	Name
1	3 <sup>rd</sup> year (Sem 5 & 6)	Manju M J
2	2 <sup>nd</sup> year (Sem 3 & 4)	Dr. Suprabha S
3	1 <sup>st</sup> year (Sem 1 & 2)	Sreeja T G

#### Faculty Advisors (for complementary courses)

Sl. No.	Batch	Name
1	I B Sc Physics (Sem 1 & 2)	Dr. Ratheesh Kumar V K
2	I B Sc Botany (Sem 1 & 2)	Dr. Nitha L P
3	I B Sc Zoology (Sem 1 & 2)	Dr. Nitha L P
4	II B Sc Physics (Sem 3 & 4)	Dr. Ratheesh Kumar V K
5	II B Sc Botany (Sem 3 & 4)	Dr. Suprabha S
6	II B Sc Zoology (Sem 3 & 4)	Manju M J

# **Faculty Members in College Level Administrative Committees**

Sl.	Name of the faculty	Administrative assignment	
No.	member		
1.	Dr. Ratheesh Kumar V K	RUSA Coordinator, IQAC Member, PTA	

		Executive Committee Member, Technical Committee Member, Purchase Committee Member
2.	Sreeja T G	Member of Admission Committee and Debate Club
3.	Dr. Suprabha S	Club Activity Coordinator
4.	Dr. Nitha L P	SC/ST Minority Cell Convenor
5.	Manju M J	Science Club Coordinator, Member of Admission Committee, Ethics Committee, Women Cell, Environment and Community Health Activity and Anti-Narcotic Cell

# **Faculty Members in University Level Administrative Committees**

• **Dr. Ratheesh Kumar V K** – Member, Boad of Studies (UG - Chemistry)

### **Department Level Activities**

#### **Department Newsletter - Chemdrone**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish biannual newsletter summarizing our activities during the two halves of each academic year. The name of the newsletter was suggested by one of our students. Our team member, Ms. Manju M J is the staff editor of the department newsletter.

#### Go Green Campaign

During the last academic year, our department has started a green initiative in the name *Go Green* campaign. It primarily aims at making the students aware about the need for keeping our environment clean and also to make effective steps in the scientific disposal of waste materials. In line with the objectives of the campaign, department level activities were conducted in strict adherence to green protocols so as to ensure minimal

production of waste along with its proper disposal. Various initiatives under the campaign is coordinated by Sreeja T G.

# **Achievements**

#### Academic

# **Student Progression to PG Course**

For the 2019 - 20 pass-out batch, out of the 22 students who completed the course successfully, 17 (77%) secured admission to PG courses in Chemistry. Details of students who secured admission for PG course at various institutions are given below.

Sl No.	Name of the student	PG Admission secured at	
1	Adhithya Venu V M	Nanjil Catholic College of Arts and Science,	
		Kaliyakkavila, Tamil Nadu	
2	Akshara L Sunil	Catholicate College, Pathanamthitta	
3	Devika S R	Nanjil Catholic College of Arts and Science,	
		Kaliyakkavila, Tamil Nadu	
4	Geethu B R	S N College, Cherthala	
5	Gopika G L	S N College for Women, Kollam	
6	Greeshma M G	S N College, Cherthala	
7	Prabhulla Devi Krishna S	Govt. Arts College, Thiruvananthapuram	
	S		
8	Reshma B V	Govt. Womens' College, Thiruvananthapuram	
9	Sruthi S S	Malankara Catholic College, Mariagiri,	
		Kaliyakkavilai	
10	Surabhi S S	University College, Thiruvananthapuram	
11	Anto J S	Malankara Catholic College, Mariagiri,	
		Kaliyakkavilai	
12	Rahi R	Mar Ivanious College, Thiruvananthapuram	
13	Rejin R	University College, Thiruvananthapuram	
14	Shilpa Shaji J S	St. Michael's College, Cherthala	

15	Sreevarsha J P	Malankara	Catholic	College,	Mariagiri,
		Kaliyakkavila	ai		
16	Ancy Mini V M	University of	Kerala, Kar	iavattom	
17	Jincy R	University of	Kerala, Kar	iavattom	

### **Result Analysis**

As the university examination for the final year students was postponed due to the lockdown in connection with the containment of COVID 19, the result analysis of the passing out batch could not be included in this report.

### Student participation in various competitions

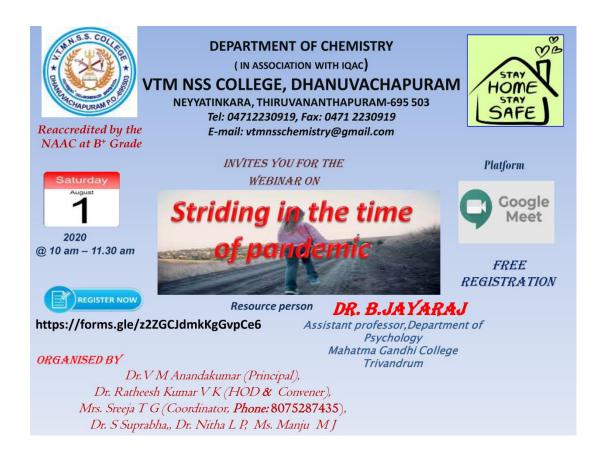
- 1. Anupama U B (III DC) participated in *EQUIZZO* organized by NSS units of Government College for Women, Vazhuthacaud on 08.06.2020.
- 2. Anupama U B (III DC) participated in *Online Quiz Competition on Covid-19* organized by NSS, Government College, Nedumangad on 27.06.2020.
- 3. Anupama U B (III DC) participated in National Online Quiz on *Ozone layer depletion*organized by Department of Botany, V T M N S S College, Dhanuvachapuram on 14.09.2020.
- 4. Anupama U B (III DC) participated in National level online Quiz on 74<sup>th</sup> Independence Day of India organized by NSS, PMSA Pookoya Thangal Memorial Arts and Science College, Kadakkal, Kollam on 15.08.2020.
- 5. Anupama U B (III DC) participated in *National Innovation and Start- up Policy Quiz-NISP 2019* organized by Institution's Innovation Council of Sree Ayyappa College for Women, Chunkankadai, Nagercoil, Tamilnaduon 13.07.2020.
- 6. Sreedevi L K (II DC) participated in the *Workshop for College Chemistry Students* and *Teachers* held online During 15-17 September 2020.
- 7. Sreedevi L K (II DC) participated in the international webinar on *Tissue Engineering A materials Chemistry Approach* on 26/09/2020.

- 8. Sreedevi L K (II DC) participated in *National online Quiz on Ozone Layer Depletion* on 14/09/2020, conducted by Department of Botany VTMNSS College Dhanuvachapuram.
- 9. Sherin S H (II DC) participated in *National online Quiz on Ozone Layer Depletion* on 14/09/2020, conducted by Department of Botany VTMNSS College
- 10. Devika U (II DC) participated in One day Regional Seminar on *Ozone Layer for life:35 years of Ozone Protection*organized by Department of Botany, VTMNSS College, Dhanuvachapuram.
- 11. Devika S B (II DC) participated in One day Regional Seminar on *Ozone Layer for life:35 years of Ozone Protection*organized by Department of Botany, VTMNSS College, Dhanuvachapuram.
- 12. Krishnapriya (II DC) participated in *National online Quiz on Ozone Layer Depletion* on 14/09/2020, conducted by Department of Botany VTMNSS College

# **Programmes Organized**

#### 1. Annual Webinar Series

Our department is organizing a webinar series annually on topics of general interest. As our world is struck with the pandemic COVID 19, all our activities got confined into online mode and this created a lot of stress on the students. In order to motivate our studies to remain positive during the time of pandemic, we have decided to conduct an interactive counselling session for student with the help of an expert in the field. We organized a programme named *Striding in the Time of Pandemic* where the students were given general awareness reading the approach to be taken during the pandemic period. The session was handled by Dr. B Jayaraj, Assistant Professor, Department of Psychology, Mahatma Gandhi College, Thiruvananthapuram and 99 participants attended the programme. The programme was coordinated by Sreeja T G.



**Outcome**: The programme was found to be very useful for the students in the time of the pandemic. The students expressed their concerns and problems to the speaker and he shared useful tips for resolving the issues. Dr. Jayaraj highlighted the need for remaining positive in life and ways to build up self-confidence.

#### 2. JAM Coaching Programme

Apart from regular tutorial sessions, we conducted frequent interaction of faculty with students to collect their feedback regarding the activities of the department as well as to orient our initiatives to its successful implementation. One of the suggestions received from the students is their lack of awareness regarding the preparation for various PG entrance examinations. They also requested their need for additional coaching sessions towards the preparation for these examinations. Based on the student feedback as well as from the suggestions received from IQAC, our department has decided to start an online coaching session for JAM examination. The sessions were given to students who

expressed their willingness to appear for the entrance examinations. The official inauguration of the programme was conducted on 15<sup>th</sup> August 2020 by the Principal Dr. V M Anandhakumar. Thirty-four students from second- and third-year degree programme joined for the class and online – sessions were handled by the faculty members of the department. The training programme is coordinated by Dr. Nitha L P.

**Outcome**: This programme was initiated in response to the student feedback and they received it very well. Several students attended the training sessions and faculty members are also very enthusiastic to help the students. The sessions are scheduled outside the regular class hours.



#### 3. Observance of Ozone Day

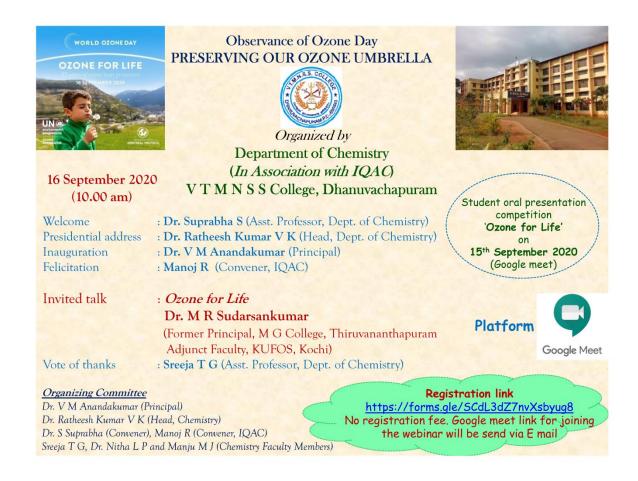
Our department observed international ozone day in connection with the programme, we have conducted an oral presentation competition among students. The programme was inaugurated on 16<sup>th</sup>September 2020 by the Principal Dr. V M Anandakumar. Dr, M R

Sudarsanakumar (Former Principal, M G College, Thiruvananthapuram presently Adjunct Faculty, KUFOS, Kochi) delivered the invited talk on *Ozone for Life*. The online programme was attended by 42 participants and the programme was coordinated by Dr. Suprabha S. An online oral presentation competition of students was also conducted as part of the programme and six presentations were selected for the competition. Dr. Sreerag R S, Assistant Professor and Head, Department of Zoology, N S S College Nilamel was invited to judge the presentations and the winners were

Sherin S H, II BSc Chemistry (1st prize)

Sreedevi L K, II BSc Chemistry (2<sup>nd</sup> prize)

Arya Prathap S, III BSc Chemistry (3<sup>rd</sup> prize)



**Outcome**: The programme was well received by the students and the invited talk focused on the achievement historical milestones in connection with our efforts to restore the

ozone umbrella. The interactive session gave the students an opportunity to share their queries and concerns regarding the need for preserving the ozone layer. The oral presentations provided students an opportunity to have an in-depth knowledge on various aspects of ozone in our environment along with developing presentation skills. The judging committee congratulated the winners and participants for their excellent effort.









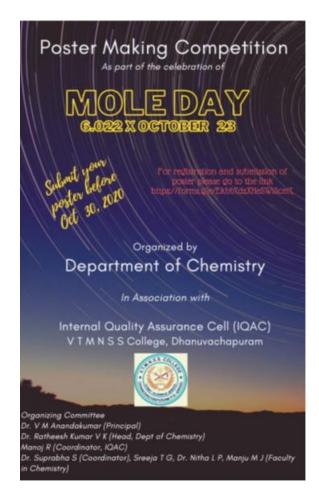
#### 4. International Mole Day Celebration

As part of the celebration of international mole day, our department coordinated an online poster presentation competition for students based on the Mole Day theme. The programme was conducted in association with IQAC and coordinated by Dr. Suprabha S. Fourteen participants registered for the programme conducted on October 2020 and they were given guidelines regarding the preparation of their poster. They were instructed to upload their poster into the department portal before 30<sup>th</sup> of Octobe r. The uploaded posters were evaluated by a judging committee lead by the programme coordinator and the winners were

- 1. Adwaith V B (III-year Chemistry) 1st prize
- 2. Sreedevi L K (II-year Chemistry)  $-2^{nd}$  prize

# 3. Sreekutty S D (II-year Chemistry) – 3<sup>rd</sup> prize

**Outcome**: This programme was intended to explore the drawing skills and creativity of students along with understanding the history of the development of science. As the competition was conducted for the students from various batches, they also got ample opportunity to discuss among themselves in the preparation of their poster. These types of programmes are expected to enhance the skills and ability of students while working in groups.

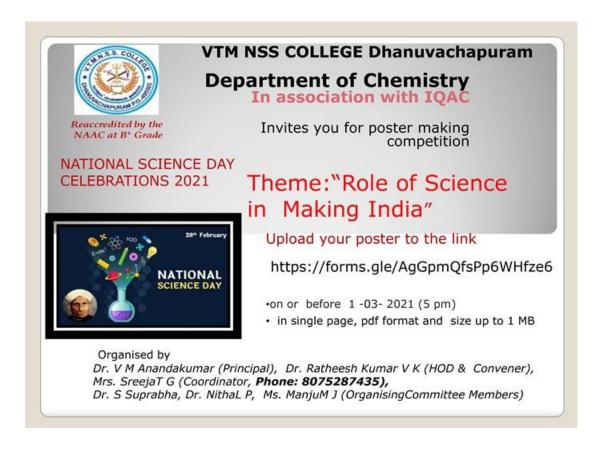


#### **5.** Celebration of National Science Day

As part of the celebration of National Science Day, our department organized an online poster making competition based on the National Science Day theme. The programme was coordinated by Sreeja T G and it was conducted in association with the college IQAC. Students were instructed with the necessary guidelines for the preparation of

posters and they had to upload their posters to the department portal. The judging committee lead by the programme coordinator evaluated the posters and announced the winners. Among the four contestants in the final round, the winners were

- 1. Anusree C S (I-year Chemistry) 1<sup>st</sup> prize
- 2. Sivadath S Suresh (III-year Chemistry) 2<sup>nd</sup> prize
- 3. Krishnapriya S S (II-year Chemistry) 3<sup>rd</sup> prize



#### 6. Pedestal Online Seminar

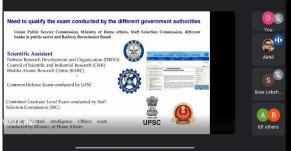
The IQAC of our college is vibrant in its efforts to lead us to newer heights. As part of its quality initiatives *Pedestal*, an annual inter-disciplinary seminar series, is organized in association with the departments of our college. This year, as we are in the forefront of our battle with the pandemic COVID 19, it was decided to conduct the seminar series in online mode. We organized our seminar on 3<sup>rd</sup> April 2021 at 10.00 am. The programme was inaugurated by the Principal Dr. V M Anandakumar and the speaker for our seminar

was Dr. Akhil K Nair, Assistant Professor, Department of Chemistry, Sri Vyasa N S S College, Wadakkanchery. Dr. Akhil spoke about the career opportunities of undergraduate Chemistry students. He also presented a clear picture regarding the institutions offering higher studies in Chemistry along with the mode of selection for these courses. Students expressed their queries during the discussion session and Dr. Akhil responded to the questions. The programme was coordinated by Manju M J and attended by 52 student participants.



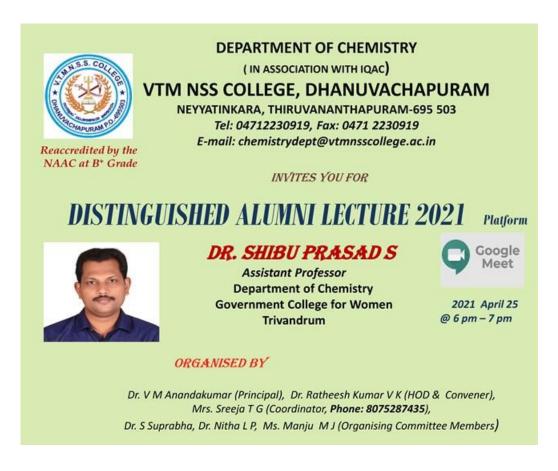
**Outcome**: The programme was well received by the students especially the final year students. This programme gave them an opportunity know about their future opportunities both is job sector as well as for further studies. Students were benefited by the knowledge about the deadline regarding various entrance examinations conducted by national institutes.





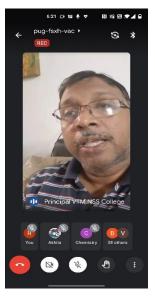
### 7. Distinguished Alumni Lecture (DAL)

As part of the qualitive enhancement approaches form IQAC, our department conducts annual DAL to offer a platform for our students to interact with eminent professionals graduated from the department. The programme also gives an opportunity for the department to recognize the achievements of its former students. This year DAL was conducted on 25<sup>th</sup> April 2021 and our chief guest was Dr. Shibu Prasad S, Assistant Professor, Department of Chemistry, Govt. Womens' College, Thiruvananthapuram. The programme was inaugurated by the College Principal Dr. V M Anandakumar and was well received by the students. The programme was coordinated by Sreeja T G.



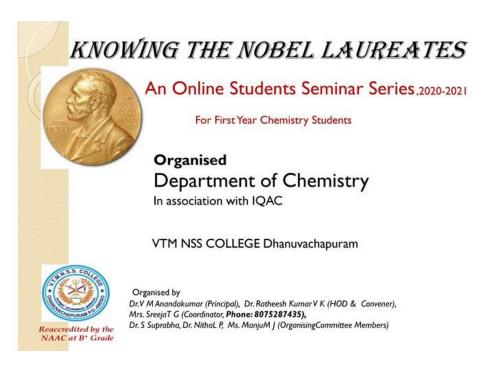
**Outcome:** Students got an opportunity to interact with successful professionals from the same institute. Also, the programme provides an opportunity for the department to recognize the former students who are successful in their life.





#### 8. Knowing the Nobel Laurates—Online student seminar series

This is an online presentation series conducted to our first-year students where each student will have to present the significant achievements of scientists who won the Nobel Prize. The presentation will be followed by an interactive session where the speaker will respond to the queries raised by the participants. The programme is conducted during holidays and coordinated by Sreeja T G.



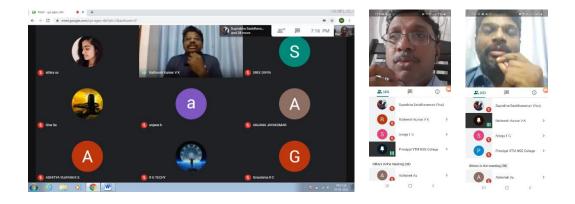
**Outcome:** The programme makes the students aware about the development of science along with the history behind each milestone in the field of scientific research. It also gives an opportunity for the student to develop skills like presentation preparation, ability to communicate effectively, leading discussions etc.

# **PTS** meetings

We have conducted Parent-Teacher-Student meeting of different student batches of our department in online mode and the gatherings were addressed by the college Principal. Parents and students shared their views and thoughts regarding the academic ambience of the department. All of them expressed their concern about the shortcomings and difficulties of online mode of teaching adopted due to the pandemic situation. They

emphasized the need for restoring offline classes as soon as the conditions become favorable. The principal addressed the concerns raised by parents and students. He also explained the situations which forced us to switch to the online mode of academic activities. He also briefed the activities undertaken by the college authorities in assisting the students to access online classes. Individual interaction of parents and students with their faculty advisors was also conducted.

For the final year batch, the PTS meetings were conducted on 9<sup>th</sup> September 2020 and 3<sup>rd</sup> January 2021. For the second-year degree students, the PTS meetings were conducted on 26<sup>th</sup> August 2020 and 17<sup>th</sup> September 2020. All meetings were conducted in Google meet platform.



#### **Publications and Presentations**

- 1. Sreeja T G, Insilico Insight into the Association between Polycyclic Aromatic Hydrocarbon and Human Toll Like Receptor in Progression of Esophageal CarcinogenesisPolycyclic Aromatic Compounds (under review).
- 2. Rejin R and Ratheesh Kumar V K *Analysis of the impact of COVID-19 lockdown on the atmosphere of Kerala*, Oral presentation in Students' Science Conference Kerala (online) organized by Sree Sankara College Kilimanoor in association with KSCSTE September 9 19, 2020.

- 3. Ratheesh Kumar V K, invited talk on *Nano Science From concepts to the context*, in Students' Science Conference Kerala (online) organized by Sree Sankara College Kilimanoor in association with KSCSTE September 9 19, 2020.
- 4. Ratheesh Kumar V K, invited talk on *Environment Pollution*, in the online programme Preparations for Competitive Examinations organized by Kerala Bhasha Institute on March 1, 2021.

### Participation in seminars/workshops/conferences/courses

#### 1. Dr. Ratheesh Kumar V K

- 1. Participated in National Webinar on *Approach to NAAC Accreditation* supported by UGC under Paramarsh schemeand organized by the Internal Quality Assurance Cell (IQAC), Mar Athanasius College (Autonomous), Kothamangalam from 06 August 2020 to 08 August 2020.
- 2. Participated in the *Seven Day National Level Faculty Development Programme On E-Content Development*, (online) organized by IQAC, MSM College in collaboration with UGC- HRDC, University of Kerala from 24 to 30 September 2020.
- 3. Participated in the *Workshop for College Chemistry Students and Teachers* (Online) sponsored by JNCASR, Bangalore and FCBS Trivandrum from 15 to 17 December 2020.
- 4. Participated in the International E-conference on *New Trends in Applied Chemistry* (*NTAC 2020*) Organized by Sacred Heart College, Thevara from 17 to 20 December 2020.
- 5. Participated in the *One Week Online National Faculty Development Program* jointly organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education and St. Joseph's College (Autonomous), Irinjalakuda from 15 to 21 January 2021.

- 6. Participated in the National webinaron *Quality Publication with Quantitative Metrics:* A Standard Approach in Article Publishing, jointly organized by the IQAC and Central Library of VTMNSS College, Dhanuvachapuram on 8<sup>th</sup> April 2021.
- 7. Participated in the National OnlineWorkshop on *Development of MOOC in Digital Platforms*, jointly organized by the IQAC and Central Library of VTM NSS College, Dhanuvachapuram on 9<sup>th</sup> April 2021.

#### 2. Sreeja TG

- 1. Participated and successfully completed the One Week online Short term Faculty Development Programme (Interdisciplinary) on "Towards a Digital Era of Teaching and Learning" which was delivered as MOOC with four quadrants, organised by **UGC-HRDC**, University of Kerala, Thiruvananthapuram in collaboration with KSMDB College, Sasthamcotta from August 12-18, 2020.
- 2.Successfully completed a 2-Week **Faculty Development Programme** on "Managing Online Classes and Co-Creating MOOCS 3.0" from July 25 August 10,2020 conducted by Teaching Learning Centre, Ramanujan College, University of Delhiunder the aegis of Ministry Of Human Resource Development, Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching.
- 3. Completed the Faculty Development Program on ICT Tools in Teaching Chemistry conducted from 2nd September 2020 to 6th September 2020 by St. Teresa's College (Autonomous), Ernakulam.
- 4. Participated in the Internationalwebinar "Recent Trends in Chemical Science and Technology" organized by Department of Chemistry, Christian College, Chengannur on 26th—September 2020
- 5.Participated in the National Webinar on "ProjectProposals Preparation and Funding Opportunities" conducted by the Department of Civil Engineering in association with ISTE Sangit's Chapter on July 30,2020.

- 6.Participatedin Online National QUIZ-Test on atheme of 'COVID-19 Pandemic:Significance of Chemistry', organized byDepartment of Chemistry, Central University of Keralaon 26-7-2020.
- 7. Participated in the webinar series on energy and materials organized by Research Department of Chemistry, Sree Vyasa NSS College, Vadakkancherry on 16<sup>th</sup>June2020.
- 8.participated in the StateLevel Webinar on Safety Awareness & First- Aid Educate (CHEM SAFE-'20) on 19<sup>th</sup>October 2020, organized by Post Graduate & Research Department of Chemistry &IQAC, Sanatana Dharma College, Alappuzha.
- 9. Attended the national webinar on QualityPublication with Quantitative Metrics: A Standard Approach in ArticlePublishing, jointly organized by the IQAC and Central Library of VTM NSSCollege, Dhanuvachapuram on 08/04/2021.
- 10.Participated in the Webinar on "Research and PublicationEthics in Science" organized by the Offices of Deans Research, and Training &Development, St.Albert's College (Autonomous) on Saturday 27th.June.2020.
- 11.Participated in the Webinar "Analytical testing of pollutants as per regulations "on 20<sup>th</sup> August 2020 by Perkin Elmer Broadcast.
- 12. Participated in the UGC sponsored online Subject Refresher Course, Women studies (open to all) from 3rd September to 18th September 2020 organized by UGC-HRDC, Aligarh Muslim University, Aligarh.

#### 3. Dr. Suprabha S

- 1.Participated in International webinar on "Chemistry for Securing Life: Opportunities Beyond Your Imaginations", held on 25/07/2020 organised by the department of Chemistry St. Joseph's College, Iringalakuda.
- 2.Participated in Webinar SCIENTIFIC SYMPHORIA 2020, Talk by Dr Deepalekshmi Ponnamma (center for Advanced Materials, Qatar University) on the topic POLYMER

NANO COMPOSITES AND THEIR ALLPICICATIONS, Organised by PG & Research Department of Chemistry, Mar Ivanios College, Thiruvananthapuram held on 22/07/2020.

- 3.Participated in Short term Faculty Development Programme on "Towards a Digital Era of Teaching and Learning", Organised by UGC-HRDC, University of Kerala, Thiruvananthapuram in collaboration with KSMDB College, Sasthamcotta from August 12-18, 2020.
- 4.Participated in National webinar on "Skill enhancement and Career Development for Students", Organised by IEDC, HHMSPBNSS College for Women, Neeramankara and Supported by Kerala Startup Mission.
- 5.Participated in FDP on ICT Tools in Teaching Chemistry conducted from September 2-6, 2020, Organised by ST. Theresa's College, Ernakulam.
- 6.Participated in Webinar on 'Importance of Intellectual Property Rights in Academics: An Overview' as part of 'TWISHA 2K21' the National Webinar Series organized by IQAC & Research & Post Graduate Department of Chemistry & Polymer Chemistry, K.S.M.D.B College, Sasthamcotta on 05 May 2021.

#### 4. Manju M J

- 1. Participated in International Webinar on "Recent Developments in Water Quality Management: Emerging Contaminants" Department of Chemistry, St Xavier's College for Women, Aluva, 27.06.20.
- 2. Participated in International Webinar on Gold Nano Clusters and Solar Cell Applications, Department of Chemistry, N S S College, Nemmara, 11.07.20.
- 3. Participated in Second Session of the WebinarSCIENTIFIC SYMPHORIA 2020 Polymer Nano Composites and Their Applications, PG and Research Department of Chemistry, Mar Ivanios College (Autonomous), Thiruvananthapuram, 22.07.20.

- 4. Participated in International Webinar on 'Nanotechnology Against COVID-19', Post Graduate and Research Department of Chemistry, Sree Narayana College for Women, Kollam, 23.07.20.
- 5. Participated in International Webinar on "CO2 Capture from Air to Control Pollution & Gas Purification" Department of Chemistry in association with IQAC, Mannaniya College of Arts & Science, Pangode, Thiruvananthapuram, 24.07.20.
- 6. Participated in International Webinar on" Chemistry for Securing Life: Opportunities Beyond Your Imaginations" Department of Chemistry, St. Joseph's College (Autonomous), Irinjalakuda, 25.07.20.
- 7. Participated in Five days National level Webinar on 'Revisiting Research Paradigms'N S S Training College, Ottapalam, 27.07.20 to 31.07.20.
- 8. Participated in "National Webinar on Hymn of herbs: Searching for panaceas from Western Ghats" Academy of Chemistry Teachers (ACT), Thiruvananthapuram, 01.08.20.
- 9. Participated in One Week Online Short-Term Faculty Development Programme on "Pedagogical and E-Learning Tools For Teaching" Sanatana Dharma College, Alappuzha in collaboration with The Kerala State Higher Education Council, 04.08.20 to 10.08.20.
- 10. Participated in Two-day Webinar on "Quantitative Analysis of Research Productivity: From Scientometrics' Perspective" supported by UGC under Paramarsh scheme, Internal Quality Assurance Cell (IQAC), Mar Athanasius College (Autonomous), Kothamangalam, 20.08.20 to 21.08.20.
- 11. Participated in International Webinar on "Practicality of Studying Science" Department of Chemistry and IQAC Sree Narayana College Chengannur, 25.08.20.
- 12. Participated in International Webinar on Writing a Research Proposal: Tips for Students and Researchers, Post-Graduate Department of Chemistry in association with IQAC, St.Stephen's College, Pathanapuram, 25.09.20.

- 13. Participated in Refresher Course (Multidisciplinary) in Techno Pedagogy Tools Towards Digital Era of Teaching, UGC- Human Resource Development Centre, University of Kerala in Collaboration with Sanatana Dharma College, Alappuzha under the auspices of Academic and Research Forum, 28.09.20 to11.10.20.
- 14. Participated in International Webinar on Progressive Approaches in Chemistry, Department of Chemistry, N S S College, Ottapalam, 21.10.20 to22.10.20.
- 15. Participated in 7th Session of SCIENTIA 2020- International Webinar Series in PhysicsPost-Graduate Department of Physics and Research Centre, Mahatma Gandhi College, Thiruvananthapuram, 22.12.20.

# Our Achievements and Activities....





















# Annual Report 2019 – 20

# **Department Level Committees**

# **Course Coordinators** (for core courses)

1	3 <sup>rd</sup> year (Sem 5 & 6)	Dr. Nitha L P
2	2 <sup>nd</sup> year (Sem 3 & 4)	Manju M J
3	1 <sup>st</sup> year (Sem 1 & 2)	Dr. Suprabha S

#### 2

# Faculty Advisors (for complementary courses)

1	I B Sc Physics (Sem 1 & 2)	Sreeja T G
2	I B Sc Botany (Sem 1 & 2)	Dr. Nitha L P
3	I B Sc Zoology (Sem 1 & 2)	Dr. Nitha L P
4	II B Sc Physics (Sem 3 & 4)	Dr. Ratheesh Kumar V K
5	II B Sc Botany (Sem 3 & 4)	Dr. Suprabha S

6	II B Sc Zoology (Sem 3 & 4)	Manju M J

#### **Department Newsletter**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish biannual newsletter summarizing our activities during the two halves of each academic year. The name of the newsletter was suggested by one of our students. Our team member, Ms. Manju M J is the staff editor of the department newsletter and we already published three news letters in accordance with the college level guidelines.

#### **Achievements**

#### **Students**

#### Academic



**Abhirami S** - Secured first rank in B Sc Chemistry Programme (University of Kerala March 2019)

Current Position: Pursuing post graduate degree in Chemistry at University of Kerala, Karyavattom

#### **College Youth Festival and Competitions**

Our department actively participated in various cultural competitions conducted in connection with college youth festival and secured selection to University level competitions. The list of programmes and the winners from our department is given below.

Adithya Venu, Surabhi S S, Reshma B V, Amritha A B, Gopika G R, Greeshma, Soorya S S, Geethu, Sreelekshmi, Akshara (Sem 6)
- First prize for Thiruvathira

Rejin R (Sem 6) - First prize for Malayalam

Elocution, Second prize for Quiz Rejin R and

Devika (Sem 6)- Third prize for Malayalam Debate

Soorya S S, Amritha A B, Uthara P V, Athira A S (Sem 6)- First prize for Nadanpattu



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# NCC



# Sivadath S Suresh (II B Sc Chemistry)

Rank: SGT

Event: Prime Minister Rally (All India)

+YEP

Achievements include

- 1. RDC IGC
- 2. Best cadet gold
- 3. Advance leadership camp
- 4. TSC: Best cadet of Trivandrum group





Avija A V (2012 - 15 batch) qualified CSIR-UGC (JRF) NET examination (Dec 2019)

Worked as Lecturer-on-Contract in our department Current position: Pursuing doctoral research at NIIST-CSIR, Pappanamcode

# **Student Progression to PG Course**

For the 2018 – 19 pass out batch, out of the 20 students who completed the course successfully, 8 (40%) secured admission to PG courses in Chemistry. The student details are given below.

1	Anju Mohanan U	Christian College, Kattakkada
2	Asha A M	University of Kerala, Karyavattom
3	Jini J O	Declined and opted for B Ed course
4	Abhirami B	University of Kerala, Karyavattom
5	Gouthami G B	Amrita University
6	Karthika A S	Noorul Islam University
7	Revathy A R	Christian College, Kattakkada
8	Sruthi R S	University of Kerala, Karyavattom

# **Programmes organized**

# 1. Observance of Ozone Day

Our department conducted ozone day awareness programmes in connection with the observance of international day. Ozone day observance lecture was delivered by the Principal and a student oral presentation was conducted. Student groups from different batches of the department participated in the programme conducted on October 17, 2019. Dr. Suprabha S coordinated the programme.



**Outcome**: The programme was well received by the students and the inaugural session focused on creating an awareness among students regarding the importance for preserving our

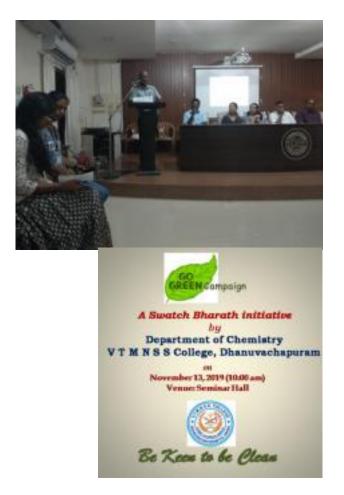
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ozone umbrella. The oral presentations provided students an opportunity to have an in-depth knowledge on various aspects of ozone in our environment along with developing presentation skills.

#### 2. Go Green Campaign

As part of Swatch Bharat Mission, our department has undertaken a clean campus initiative named *Go Green* campaign. The programme was officially inaugurated on November 13, 2019. The primary focus of this initiative is to make our students aware about the environmental hazards of unscientific waste management along with the need to reduce the formation of waste. As part of this campaign, we are implementing green practices in our department activities. In the next phase we are planning to identify student groups as Green Volunteers to spread the message of this campaign in the whole campus and ensure sustainability to our efforts. Ms. Sreeja T G is the coordinator of the campaign.

**Outcome**: Being a long term programme, the major objective of this campaign is the creation of proper awareness about the need to protect our environment and replacement of existing methodologies to greener protocols for the conduct of various activities.



#### **3.**Elements of Beauty

The year 2019 is celebrated as international year of periodic table (IYPT 2019) worldwide. As part of our celebrations towards this milestone, we organized a poster exhibition describing

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various aspects of the elements in the periodic table. The programme was conducted on December 31, 2019 and the exhibition was well received by the whole college. The programme was coordinated by Dr. Nitha L P.



**Industry/Research institution visit** 

Our department has conducted industrial/research institution visit for our final year students. We visited NIIST-CSIR Pappanamcode on 09/10/2019 and as per the feedback from the students, the visit was very motivating to them. They got an opportunity to understand the working principles of various instrumentation facilities used in scientific research. They also interacted with research groups on latest advancements in various fields of science. The field visit was accompanied by Dr Ratheesh Kumar V K and Ms. Avija A V.

Our department made industrial visits to Mysore Sandal Wood Factory and Mysore Silks on 29/02/2020 and the students got a chance to understand the scientific procedures and protocols being used in chemical industries to produce consumer goods. Ms. Manju M j and Mr. Sarath Krishna G S were the accompanying staff members for the visit.

**Outcome**: Apart from the fulfillment of the Degree programme requirement, our department routinely conducts student visits to industry and research institutes of national importance. Through these visits, students will get ample opportunity to interact with eminent professionals in the field of science along with understanding their opportunities for advanced studies and career paths in their chosen field of interest. These visits also provide a platform

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for the students to understand the real-world applications of the scientific concepts they are studying.



#### 5. Distinguished Alumni Lecture (DAL)

As a qualitive initiative from college IQAC, this year also we have conducted our annual DAL. Ms. Avija A V, doctoral student at CSIR - NIIST and an alumnus of 2012 - 15 batch, interacted with our students and shared her views and experiences with them for

their success in the chosen field.

### 6. Our hand sanitizer – Safe Hands

As part of the *Break the Chain* campaign in association with the containment of the spreading of COVID – 19 pandemic, we have prepared hand sanitizer under the name *Safe Hands*. The formulation was in strict adherence to the guidelines provided by WHO and the sanitizer made was distributed to all departments of our college.

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### **6. Inauguration of webinar series**

During this academic year, we have started to conduct webinar/seminar series on topics intended to popularize the message of science among youngsters. In this series, It has been decided to include sessions from general science topics, directly related to the society, handled by eminent science professionals. The inaugural lecture of this series was given by Dr. Prathish K P, Senior Scientist, CSIR – NIIST, Pappanamcode on 30/05/2020. The programme was well received by our students and participants from other institutes. The session was followed by active discussion from the participants.

## **PTS** meeting

We have conducted Parent-Teacher-Student meeting of different student batches of our department and the gatherings were addressed by the college Principal. Parents and students shared their views and thoughts regarding the academic ambience of the department. Individual interaction of parents and students with their faculty advisors was also conducted.

## **Publications**

1. Jack Saltiel, Christopher E Redwood and **Ratheesh Kumar V K** *The photoisomerization of cis,trans-1,2-dideuterio-1,4-diphenyl-1,3-butadiene in solution. No bicycle-pedal*, Photochem. Photobiol. Sci., **2019**, *18*, 2174-2179.

#### Participation in

## seminars/workshops/conferences/courses 1.

#### Dr. Ratheesh Kumar V K

- 1.Participated in the Two Day National Seminar on Molecules to Supramolecules: A Synthetic Perspective, organized by the Department of Chemistry, Govt. Victoria College, Palakkad from 31/10/2019 to 01/11/2019.
- 2. Participated in the One Day Workshop on Teaching Learning & Evaluation: Changing Protocols in Pedagogial Innovations, organized by IQAC, V T M N S S College, Dhanuvachapuram on 26/11/2019
- 3. Participated in the One Day Workshop on Scholarly Communication in Digital Environment: New Perspectives, organized by Central Library and IQAC of V T M N S S College, Dhanuvachapuram on 09/12/2019.

#### 2. Sreeja T G

- 1. Participated in the International Webinar Lecture Series organised by the Department of Chemistry, St. Michael's College, Cherthala, Alappuzha, Kerala from 21-23 May 2020. 2. Participated in Faculty Development Programme from 25 to 29 May 2020 on "Moodle Learning Management System" organized by Sree Narayana College, Chengannur with course material provided by Spoken Tutorial Project, IIT Bombay funded by the National Mission on Education through ICT, MHRD, Govt. of India.
- 3. Participated at the International Online conference on "COVID 19 Pandemic Scenario: Challenges and Solutions in Language

Teaching and Learning" held on 29 to 30 May 2020, organized by Forien Languages, Garden city University, Bengaluru.

4. Participated in "Moodle Learning Management System training" in January 2020 organized by Sree Narayana College, Chengannur with course material provided by Spoken Tutorial

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Project, IIT Bombay funded by the National Mission on Education through ICT, MHRD, Govt. of India.

- 5. Participated in the webinar "unlock chemistry in lockdown" organized by Department of Chemistry, St. Joseph's College for Women, Alappuzha on 19th–21st May 2020. 6. Participated in VIRTUOSA 2020 National webinar series organized by IQAC, KSMDB College, Sasthamcotta from 14 to 20 May 2020
- 7. Attended webinar "covid- 19 and health issues", organised by Department of Chemistry, St. Xavier's College, Thumba on May 16, 2020
- 8. Participated in the National webinar on "Advanced Materials for Future "organized by Department of physics and IQAC of Morning Star Home Science College, Angamaly on 29 May 2020
- 9. Attended the Two Day National Online Seminar on "Re-inventing Quality Assurance: A Post Pandemic Guide for Teachers" organized by the Internal Quality Assurance Cell of T.K.M college of Arts and Science from 19 to 20 May 2020.
- 10. Participated in the National webinar on "Need for Progress towards Fast Photography: A Glimpse through Femtosecond Spectroscopy" organized by Department of Chemistry, St. Xavier's College for Women Aluva on 22 may 2020.
- 11. Participated in the Vichinthana Webinar Series 2020 on the

topic entitled "Be fit Boost Immunity" organized by IQAC and IETE student's forum of Sree Ayyappa College Chengannur on 15 May 2020.

- 12. Participated in the one day webinar "an Introduction to Smart Materials" conducted by Department of Chemistry, St Grigorios college, kottarakara on 23 May 2020 13. participated in the National Webinar" Vichintana Webniar Series 2020" on the topic entitled "Strategies for Academic Publications" organized by Internal Quality Assurance Cell (IQAC) & IETE Student's Forum of SreeAyyappa College, Chengannur, Kerala on May 20, 2020
- 14. Completed the covid 19 awareness quiz organized by IQAC, St. Josephs College, Irinjalakuda on 15<sup>th</sup> May 2020.
- 15. Participated in the -IFS Forensic Science Quiz and a pledge to adopt best practices on prevention of coronavirus disease as specified by WHO on 18<sup>th</sup> May 2020

16. Completed the covid 19 awareness quiz organized by NSS unit 556 of NMIT held during April/May 2020.

- 17. Participated in the International Light Day 2020 Quiz-Light for life- organized by Department of physics, Sree Ayyappa College for women, Chunkankadai, Nagarcoil on 16 May 2020.
- 18. Successfully completed the Online Awareness Quiz on 'A Search for Solutions in Nature' an Intercollegiate Online Quiz Competition with a score of 90 % jointly conducted by Department of Botany & Biodiversity Club of IQAC on 18/05/2020
- 19. Successfully completed E Chem Quiz organized by Department of Chemistry, Dr Zakir Husain College Ilayangudi on 26 may 20

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#### 3. Dr. Suprabha S

- 1. Participated in the One Day Workshop on Teaching Learning & Evaluation: Changing Protocols in Pedagogial Innovations organized by IQAC, V T M N S S College, Dhanuvachapuram on 26/11/2019.
- 2. Participated in Faculty Development Programme from 25 to 29 May 2020 on "Moodle Learning Management System" organized by Sree Narayana College, Chengannur with course material provided by Spoken Tutorial Project, IIT Bombay funded by the National Mission on Education through ICT, MHRD, Govt. of India.
- 3. Participated in the National webinar on "Need for Progress towards Fast Photography: A Glimpse through Femtosecond Spectroscopy" organized by Department of Chemistry, St. Xavier's College for Women Aluva on 22 may 2020.

#### 4. Manju M J

- 1. Participated in the National Symposium Researchers' Meet 2019 (RM 2019) organized by the PG & Research Department of Chemistry, N S S Hindu College, Changanacherry on 30/07/2019.
- 2. Participated in the One Day Workshop on Teaching Learning & Evaluation: Changing Protocols in Pedagogial Innovations organized by IQAC, V T M N S S College, Dhanuvachapuram on 26/11/2019.

# Annual Report 2018 –19

#### **Courses offered**

- 1. Core course– BSc Chemistry
- 2. Complementary courses—Chemistry courses to BSc Physics, Botany and Zoology
- 3. Open course –Essentials of Chemistry (Offered to S5 students from other departments)
- 4. Elective course Polymer Chemistry (*Offered to S6 students pursuing BSc Chemistry*)

Students admitted to first year during 2018- 19 -44

**Total number of students - 120** 

**Number of full-time teaching posts**–5 (all posts are filled)

Students to full-time teacher ratio – 24

## Faculty, staff and student details

#### **Faculty**

Sl. No.	Name	Designation
1	Dr.Rajalekshmi	Assistant Professor & Head
2	Dr. Ratheesh Kumar V K	Assistant Professor
3	Dr.Hema PS	Assistant Professor
4	Dr. Nitha L P	Assistant Professor
5	Dr.Jaimy	Assistant Professor

### Non-teaching staff

Sl. No. Name Designation

# **Department Level Committees**

## **Course Coordinators** (for core courses)

Sl No Batch		Name	
1	3 <sup>rd</sup> year (Sem 5 & 6)	Dr. Ratheesh Kumar V K	
2	2 <sup>nd</sup> year (Sem 3 & 4)	Dr. Nitha L P	
3	1 <sup>st</sup> year (Sem 1 & 2)	Dr.Hema PS	

## Faculty Advisors (for complementary courses)

Sl. No.	Batch	Name
1	I B Sc Physics (Sem 1 & 2)	Dr.Rajalekshmi
2	I B Sc Botany (Sem 1 & 2)	Dr. Ratheesh Kumar V K
3	I B Sc Zoology (Sem 1 & 2)	Dr.Hema PS
4	II B Sc Physics (Sem 3 & 4)	Dr.Jaimy
5	II B Sc Botany (Sem 3 & 4)	Dr. Ratheesh Kumar V K
6	II B Sc Zoology (Sem 3 & 4)	Dr. Nitha L P

# **Faculty Members in College Level Administrative Committees**

Sl. No.	Name of the faculty member	Administrative assignment
1.	Dr.Rajalekshmi	IQAC coordinator, Member-purchase committee,
		Planning board, Gender justice forum, Member-

#### women's club

2.	Dr. Ratheesh Kumar V K	Coordinator-WWS, RUSA	
		Member- IQAC, PTA Executive Committee , Technical Committee ,Anti-Ragging squad	
3.	Dr.Hema PS	Convener-Women's cell, Member-Internal Complaint Committee, Grievance Redressal Cell, Science club	
4.	Dr. Nitha L P	Convener- SC/ST Minority Cell , Member-women's club	
5	Dr.Jaimy K B	Member-Research Committee	

## **Department Level Activities**

#### **Bridge Course**

Bridge course is conducted for the first-year students during semester 1 to ensure their smooth transition from secondary education to college level system. The course is conducted during the first year of the Degree programme with a specific syllabus. The syllabus includes topics describing the basic concept behind theory and laboratory courses included in the B Sc Chemistry programme. The introductory laboratory sessions include a briefing about the different types of experiments included in the degree programme along with a clear insight into the importance of various safety protocols to be observed while working inside a laboratory. Our department provides preliminary safety training to all students before the commencement of their laboratory course. As part of this training, student safety personnel will be selected for each batch, and they will be given additional responsibility for maintaining safety protocols while conducting experiments. The whole process will be under the monitoring of faculty members in charge of the respective laboratory session. The course gives an overall awareness to the students regarding the BSc programme as well as their

future career opportunities after completing the degree programme. Manju M J coordinated the bridge course during this academic year.

College level induction programme was also conducted to the first semester students of our department. During the programme, students were given a general outline regarding the rules and regulations of the CBCS system as well as the system of administration in the institution. All the sessions were conducted online and were coordinated by Dr.Hema P S.

#### **Counseling Cell**

Our department constantly identifies students who need individual attention on various aspects to remain good with their studies and provides additional support to them through our counseling cell. The activities of the counseling cell are coordinated by Dr. Nitha L P. The members include Dr.Hema PS and Dr.Jaimy.

#### **Department Level Monitoring Committee (DLMC)**

The department has a statutory DLMC in adherence to the University guidelines and the activities of DLMC are coordinated by Dr.Rajalekshmi. All faculty members of the department are members of the committee. The role of DLMC is to monitor the continuous evaluation process along with addressing student concerns. The CE marks as well as the consolidated attendance statement for each semester will be prepared as per the guidelines published by the University of Kerala and the same will be made available to the students for their scrutiny. Any grievances in connection with the CE marks or attendance can be reported to the respective course coordinators or faculty advisors. The grievances which were not resolved at this level will be forwarded to the DLMC for suitable decision. The mechanism also ensures to address the concerns raised by students from other departments pursuing our complementary courses as well as the open course. Any unresolved matter from DLMC will be forwarded to the College Level Monitoring Committee (CLMC). Uploading of CE marks to the University portal is carried out after finalizing the same by DLMC.

#### Grievance cell

The department level grievance cell constantly addresses the complaints/suggestions by the students and strives to derive timely solutions. It acts as the primary platform for student grievances. Students can directly register their complaints to the cell convener or the respective faculty advisors. We also conduct periodic interaction of faculty advisors with students to ensure that the student grievances and suggestions are properly addressed. Depending upon the nature of the grievance/suggestion received, it will be either resolved at the department level or brought to the attention of the college level committees. As per our request, new bins are placed in front of the department, to collect the plastic and biodegradable wastes. Additional lights and fans were installed inside the class rooms, laboratories and toilets. During the pandemic period, conduct of laboratory sessions with proper social distancing sufficient number of laboratory apparatus was procured with the financial support from PTA. The cell is headed by Dr.Rajalekshmi with the faculty advisors as its members.

#### **Remedial coaching**

Our department undertakes additional helping sessions to slow learners and monitor the effectiveness of the approach. We have a remedial coaching programme coordinated by Dr Nitha L P. All faculty members of the department are members of this committee and as per the requirements raised by students; additional teaching hours are undertaken to various core and complementary courses. Learning materials prepared by the faculty members are also provided to the students on selected topics depending upon the request made by the students. After the end semester result analysis, remedial coaching is provided to students who failed in different courses so as to enable them to become successful in further appearance for university examinations.

#### Laboratory-in-charge

Faculty members in charge of various batches for their practical course are primarily responsible for the smooth conduct of laboratory sessions and safety inside laboratory. The activities ensuring the smooth functioning of laboratory as well as implementation of standard safety protocols during the conduct of practical course are coordinated by Dr. Hema PS and the stock inside the laboratories are taken care by laboratory attender.

#### **Maintenance and Purchase**

The department level maintenance requirements, repair of instruments and procurement of articles are handled by the maintenance and purchase committee. The committee is convened by Dr. Rajalekshmi and includes Dr. Hema P S and Dr. Nitha L P as members. The responsibilities of the committee include periodic monitoring of the inventories of the department along with the scrutiny and consolidation of purchase requirements submitted by various faculty members.

#### **Academic Programme Committee**

We have a department level academic programme committee that publishes the department academic calendar in consultation with that published by the University of Kerala and the college. The committee makes periodic academic audits to ensure the completion of academic activities in strict adherence to the published academic calendar and suggests remedial measures as and when required. The committee also monitors the preparation of internal examination question papers as well as the evaluation of the answer scripts and it is led by Dr.Jaimy.

#### Add-On course

The department offers an add-on course entitled *Chemistry of Cosmetics* to selected students which are an extension of their university curriculum. During this academic year, eighteen students were enrolled for the course and the course contents were mainly delivered through online mode. The course is coordinated by Dr.Nitha L P.

#### **IQAC** Committee

In line with the guidelines of the college IQAC, we have constituted a department level IQAC committee headed by Dr. Ratheekumar V K and all other faculty as members to look after the proper documentation of the activities of the department. This committee monitors the department level activities and ensures the adherence of these activities to the department action plan.

#### **Department Newsletter - CHEMDRONE**

In association with the quality enhancement initiatives by the college IQAC, our department started to publish newsletter summarizing our activities during each academic year. This year's name of the newsletter was suggested by one of our students Mr Abhiram S. Dr. Ratheekumar V K is the staff editor of this year's department newsletter. Mr. Navaneeth T R and Ms Asha A M (S6 and S4 Chemistry students) are the student editors.

# **Achievements**

## **Academic**

## **Student Progression to Higher Studies**

out of the 19 students who completed the course successfully, 8 secured admission to higher studies. Details of students who secured admission for higher course at various institutions are given below.

SI No.	Name of the student enrolled in to higher education	Program graduated from	Name of the programme admitted to
1	Arya M p Nair	BSc Chemistry	MSc Chemistry
2	Anjana Krishna S	BSc Chemistry	MSc Chemistry
3	Athira M S	BSc Chemistry	MSc Hydrochemis try
4	Ganga PS	BSc Chemistry	B Ed
5	Athira B Ashok	BSc Chemistry	B Ed

6	Shaithra S	BSc Chemistry	MSc Chemistry
7	Aswathy Krishnan G	BSc Chemistry	MSc Chemistry
8	Jini J O	BSc Chemistry	B Ed
9	Arya Devi S	BSc Chemistry	MSc Biochemistry
10	Neethu P S	BSc Chemistry	Diploma in Dialysis Technology
11	Asha A M	BSc Chemistry	MSc Chemistry
12	Anjana Krishna S v	BSc Chemistry	MSc Chemistry

# **Student achievements**

1. Ms. Abhirami bagged top position at the university level for BSc Chemistry examination, May 2019.



 Mr. Abhiram P S (III DC) secured third position in National level Badminton Championship (2016 & 2017), first position in State level Badminton Championship (2016 & 2017), participated in Inter-University Badminton Championship (2016) selection to University Ball Badminton team (2017)



**3.** Mr. Navaneeth T R (III DC) secured first position in inter-collegiate Roll Ball tournament (2017), Fourth position in inter-collegiate cricket and soft

ball tournament (2017), Selection to Inter-University Cricket Tournament



**4.** Ms. Asha A M (II DC) secured 2<sup>nd</sup> position in elocution competition held at Rajiv Gandhi Biotechnology Centre, Thiruvananthapuram (2018)



# Alumni

Mr. Akhil P. an alumnus of the department qualified UGC JRF and joined for Ph. D. at CSIR NIIST



## PLACEMENT OF OUTGOING STUDENT DURING THE YEAR

Sl.No	Name of student placed and contact details	Program graduated from	Name of the employer with contact details	Pay package at appointment
1	Vaisakh R G	BSc Chemistry	KPSC - Fire and Rescue Services Academy	20,000-45,800/-

# Through research organizations

To motivate our students to the field of research, we are providing an opportunity to visit various national laboratories of repute through students outreach programme. As part of this programme our students has visited four national laboratories and one industry.

# Visit to CSIR-NIIST Thiruvananthapuram

The National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, is a constituent Laboratory of the Council of Scientific and Industrial Research (CSIR). The institute has established state-of-the-art facilities for conducting advanced research in the areas of interest. Our students have got an opportunity to visit CSIR-NIIST. This was a great opportunity for our students to know

about the interdisciplinary research. This visit helped our students get motivated in the field of research.



# Visit to IISER Thiruvananthapuram

The Indian Institute of Science Education and Research Thiruvananthapuram (IISER-TVM) is dedicated to scientific research and science education of international standards. IISER visit helps the students to understand about various aspects of basic science research and different higher Education opportunities such as iPh.D and Ph.D offered by IISER. So this visit was an excellent exposure for students , who wish to pursue a research career.



# Visit to RGCB Thiruvananthapuram

The RGCB (Rajiv Gandhi Centre for Biotechnology) is a national research institute. RGCB is mainly concentrated on biological research, which include Chronic Disease Biology, Tropical Disease Biology and Disease Biotechnology.



Visit to SCTIMST Thiruvananthapuram

Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) is an Institution of National Importance under the Department of Science and Technology, Govt. of India. The Institute focuses on high quality, advanced treatment of cardiac and neurological disorders, indigenous development of technologies for biomedical devices and materials and public health training and research



# Field visit/ study tour to S6 students

The chemistry department has conducted a tour program for BSc final year students. As part of the tour, we have attended an industrial visit to Karnataka Silk Industries Corporation Ltd.





Industrial Visit to Karnataka Silk Industries Corporation Ltd.

## **PTS** meetings

As part of the frequent interaction with parents, we regularly conduct PTS meeting of our students



# Dr. K. Mohankumar (Principal) has retired from the service on March 2019

You are an embodiment of optimism and hard work. Thank you for inspiring us every day at work. We wish you a happy retirement life9



**Facilities in our department** 



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