

**DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE**

**(Autonomous)**

Re-Accredited with "A++" Grade by NAAC (3rd cycle)

College with Potential for Excellence (Linguistic Minority Institution)

Affiliated to University of Madras, Arumbakkam, Chennai 600106.



**POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY**

# ATOMIC BYTE

Volume 11



## FROM SECRETARY'S DESK



### ***“ATOMS ARE THE ALPHABET OF NATURE.” — RICHARD FEYNMAN***

I am delighted to extend my heartfelt congratulations and best wishes on the release of 11th edition of the newsletter “Atomic Byte.” This initiative beautifully highlights the progress and achievements of the Department of Chemistry, from innovative research to outstanding student accomplishments. It is a testament to the dedication of the faculty and students and showcasing the department excellence.

A newsletter like this serves as an excellent platform for communication, strengthening the bond within the department and keeping everyone informed about the latest developments. It inspires collaboration, encourages knowledge sharing, and celebrates the success of our dedicated faculty and students. I sincerely appreciate the effort and commitment that has gone into creating this newsletter. I am confident that it will be a valuable resource and a source of inspiration for everyone associated with the department.

My congratulations to the Head, staff, and students for their remarkable efforts. May this newsletter achieve great success and reflect the vibrant and dynamic spirit of the Department of Chemistry.

Shri Ashok Kumar Mundhra  
Secretary

## FROM PRINCIPAL'S DESK



***“CHEMISTRY IS NOT JUST ABOUT SUBSTANCES REACTING; IT’S ABOUT UNDERSTANDING WHY THE WORLD WORKS.” — LINUS PAULING***

Heartiest congratulations to the department of chemistry on the launch of 11th edition of the Atomic Byte to celebrate the brilliant research, hard work and achievements of our students and faculty. This newsletter is a true reflection of the vibrant scientific community you have built. Wishing you all the best for future editions.

Newsletters play a vital role in fostering a sense of belonging, highlighting achievements, and disseminating information about research, events, and other important activities. I am sure that this newsletter will effectively showcase the vibrant work being carried out by the faculty and students of the Chemistry Department. It will provide an excellent opportunity to share insights, celebrate accomplishments, and keep everyone informed about the latest developments.

I sincerely appreciate the efforts of the staff and students whose dedication has made this publication a successful one. Their commitment and teamwork truly deserve commendation.

Best wishes for the future prospects.

-Dr.S. Santhosh Baboo  
Principal

## FROM HOD'S DESK



### ***CHEMISTRY TEACHERS NEVER DIE; THEY JUST STOP REACTING...!***

I am pleased to convey my sincere congratulations on the release of the 11<sup>th</sup> edition of our department newsletter Atomic Byte. The publication admirably reflects the academic vigour, research initiatives, and notable achievements of the students as well as faculties from the department. It is a proud reflection of the collective efforts and commitment of the faculty and students in growth of department and institution.

A newsletter of this nature serves as an effective medium for communication, fostering a stronger sense of unity within the department while keeping all stakeholders updated with recent developments in knowledge and technology. The department ably supported by the Secretary, Principal and the management of DGVC has always been instrumental in promoting collaboration, encourages the exchange of knowledge and strengthening departmental bonds by highlighting important milestones. It celebrates the achievements, recognizes the hard work of the faculty and students through academic and non-academic performance. I sincerely commend the team for their dedication and effort in bringing out this publication, which will undoubtedly serve as a valuable and inspiring resource.

This publication is a commendable reflection of the Department of Chemistry's commitment to quality.

Best wishes for its continued success and impact.

-Dr. R. Kumaran  
Associate Professor & Head

## DGVC CHEMICAL SOCIETY A SHORT PROFILE

The Department of Chemistry has been promoting a variety of co-curricular and extracurricular activities under the DGVC Chemical Society since its inception 2016. Throughout the year, the society organizes intra and inter-college events to enhance their individual skills and motivate the students in chemistry and research through events like CSIR - NET and skill development workshop. It also encourages team building activities and leadership qualities.

### STAFF COORDINATORS



Dr. C. Kavitha  
Assistant Professor  
Secretary



Dr. A. Vijayaraj  
Assistant Professor  
Joint Secretary



Mr. V. Rajagopalan  
Assistant Professor  
Treasurer

### STUDENT COORDINATORS



Harini.H  
2<sup>nd</sup> M. Sc Chemistry  
Secretary



Monish.B  
3<sup>rd</sup> B. Sc Chemistry  
Joint Secretary



S. Charan Raj  
2<sup>nd</sup> M.Sc Chemistry  
Technical Admin



V. Sugeshwaran  
2<sup>nd</sup> M.Sc Chemistry  
Technical Admin



A. Rithiyka  
1<sup>st</sup> M.Sc Chemistry  
Treasurer



D. Harini  
2<sup>nd</sup> M.Sc Chemistry  
Hospitality Member



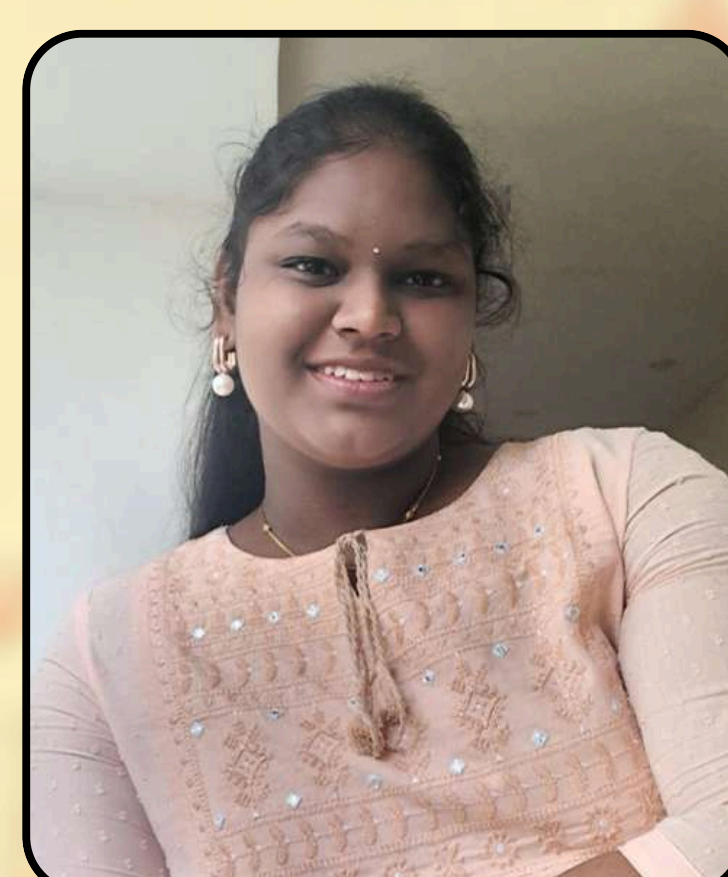
R. Preethi  
2<sup>nd</sup> M.Sc Chemistry  
Hospitality Member



K. Rithika  
2<sup>nd</sup> M.Sc Chemistry  
Hospitality Member



B. Pavithra  
2<sup>nd</sup> M.Sc Chemistry  
Hospitality Member



M. Dhadchayani  
2<sup>nd</sup> M.Sc Chemistry  
Hospitality Member

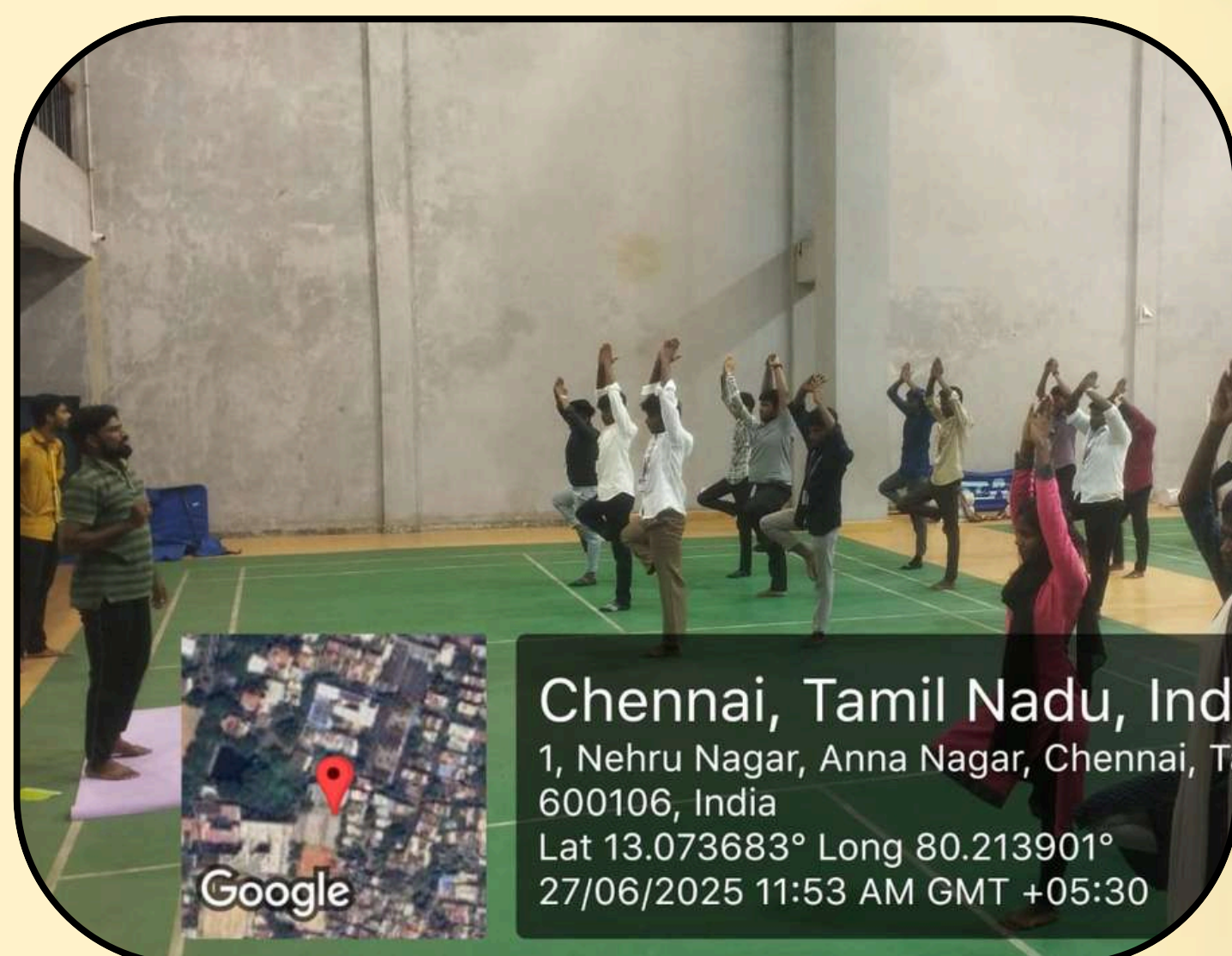
## INAUGURATION OF THE DGVC CHEMICAL SOCIETY



The DGVC Chemical Society was inaugurated on 21<sup>st</sup> July 2025. The event was graced by **Dr. S. Rajalakshmi** as the Chief Guest, who delivered an insightful lecture on environmental pollution and its chemical basis.

A student-led Quiz competition on Environmental Chemistry and health hazards added interactive learning to the programme. With the participation of 178 students, the event successfully enhanced awareness, encouraged teamwork and with active learning and reinforced the role of Chemistry in societal and environmental responsibility.

# STUDENT'S INDUCTION PROGRAM (SIP)



The Student Induction Programme – **Deeksharambh** was organized to welcome and orient freshers to college life through a series of engaging sessions. The inaugural programme featured a motivational address by **Kalaimamani Marabin Maindan M. Muthaiah**, along with guidance from the college administration. Academic sessions were led by Dr. K. Premalatha, Dr. R. Kumaran, and Dr. M. Vanjinathan, who introduced students to Chemistry, curriculum, and mentoring.

Wellness and holistic development were addressed through yoga by Dr. A. Vijayaraj and a motivational talk by Dr. W. Samuel. Sessions on AI, entrepreneurship, and Career opportunities were conducted by Dr. T. Augustine Arul Prasad, Dr. R. Mythily, and Dr. Tamizhdurai. Overall, the programme enriched students academically, personally, and professionally, preparing them for their academic journey.....!

## CSIR WORKSHOP

The DGVC Chemical Society proudly hosted a three-day CSIR workshop at DGVC College.

It served as a stepping stone for aspiring researchers and CSIR achievers.

The Eminent resources persons were

**Dr.P.Anbarasan(IIT Madras),**

**Dr.S.R.Bheeter(St.Joseph's College)**

**Dr.P.Sathiaseelan (Bishop Heber College),**

**Dr.C.Amirthavalli(MCC)**



## INDUSTRIAL VISIT TO INDRA GANDHI CENTRE FOR ATOMIC RESEARCH



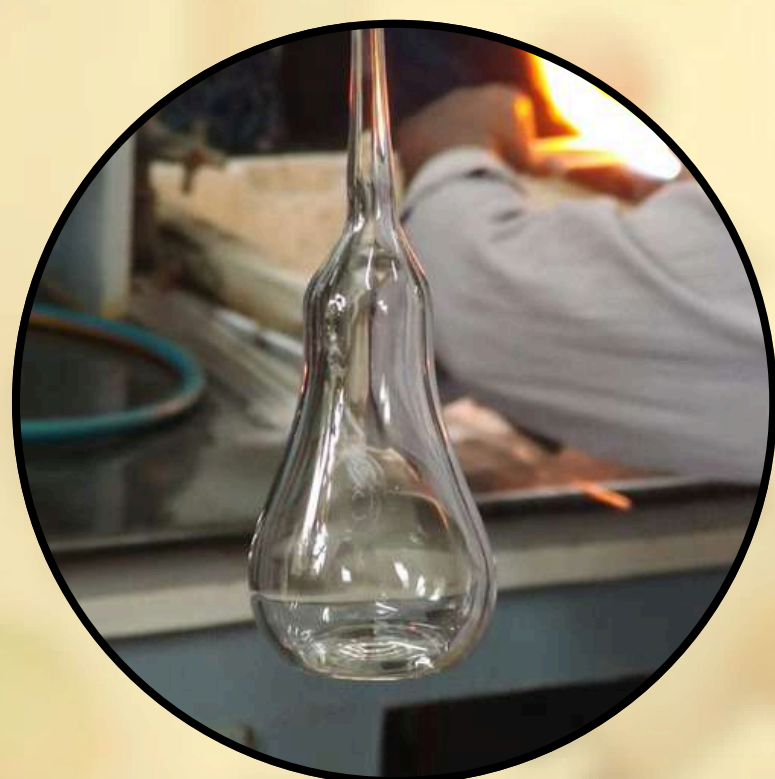
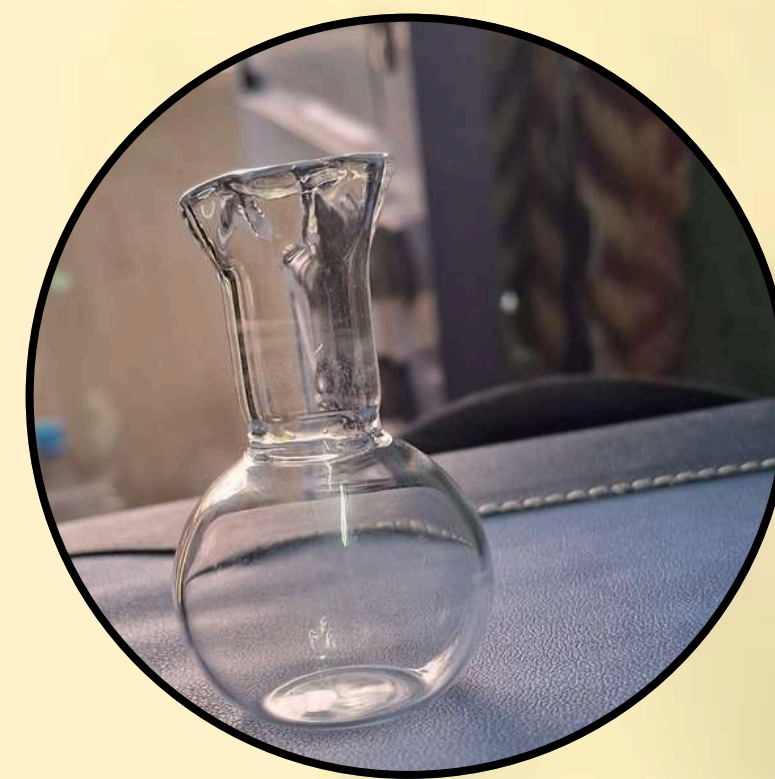
The PG and Research Department of Chemistry organised an industrial visit to the Indira Gandhi Centre for Atomic Research (IGCAR) in Kalpakkam on 29<sup>th</sup> August, 2025. The visit was funded by the management. A total of 49 postgraduate students participated in the visit, accompanied by the faculty members Dr. M. Vanjinathan, Dr. A. Naresh Raj, Dr. C. Kavitha, and Dr. V. Shyamala Devi.

**The officials of IGCAR gave an overview of institution's objectives and its role in advancing nuclear science and technology, career opportunities, examinations details and gave a comprehensive explanation of fast breeder test reactor (FBTR) using 3D model.**

The participants explored sodium laboratory, spectroscopy laboratory and meanwhile learned about thermoluminescence and radiation exposure within human body.

## HANDS ON TRAINING:

"The DGVC Chemistry Society remains active with new member inductions and the successful organization of the Glass Blowing workshop."



## INSPIRING ALUMNI LECTURE-1



"INSPIRING ALUMNI" Lecture Series held on 3<sup>rd</sup> January 2026. **Dhinakaran.S.P.G**, KENC Govt High Secondary School, motivated students to achieve goals and shared tips on competitive exams. Students gained valuable insights and role models.

## INSPIRING ALUMNI LECTURE-2



An Alumni Invited Talk was successfully organized on 8<sup>th</sup> January 2026. The session was handled by **Dr. T. SivaramaKrishnan**, who delivered intellectual talk on IIT-JAM classes and elaborated the strategic preparation methods for IIT-JAM and GATE exams. The motivational insights shared by the speaker was beneficial and inspired us.

# RASAYANOTSAV - 2026


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PG AND RESEARCH DEPARTMENT OF CHEMISTRY  
CORDIALLY INVITE YOU TO  
**RASAYANOTSAV '26**  
THE ANNUAL INTER-COLLEGIATE CHEMFEST


ON 28<sup>TH</sup> JANUARY 2026  
@ 9:00 AM


VENUE: SRI VALLABHACHARYA  
AUDITORIUM


**CHIEF GUESTS**

  
Dr. SYED AMANULLA  
Principal & Chief Manager  
CIPET, Guindy

  
Dr. S. Narayanan  
Deputy Manager - R&D  
Manali Petrochemicals Limited

  
Dr. R. Kumaran  
Associate Professor & Head  
Department of Chemistry

  
Dr. S. Santhosh Baboo  
Principal

  
Shri Ashok Kumar Mundhra  
Secretary

**FACULTY CO-ORDINATORS**

Dr. C. Kavitha  
Assistant Professor  
Secretary

Dr. A. Vijayaraj  
Assistant Professor  
Joint Secretary

**STUDENT CO-ORDINATORS**

Ms. H. Harini  
2nd M. Sc  
Secretary

Mr. B. Monish  
3rd B.Sc  
Joint Secretary

The 28<sup>th</sup> edition of **RASAYANOTSAV- 2026**, an annual intercollegiate Chemfest, will be conducted on 28.01.2026. This event provides an excellent opportunity for chemistry students from various colleges to discover and showcase their unique talents. **Dr. SYED AMANULLA** Principal & Chief Manager CIPET, Guindy has kindly consented to be as the Chief Guest for the inauguration, while **Dr. S. NARAYANAN** Deputy Manager – R&D Manali Petrochemicals Limited will lead the valedictory session. Students from various colleges across the city have registered for of events such as Conquer PG Quiz, Chem intellect (UG quiz), Surprise event, Act-O-chem, Chem-ideathon, JAM, Ion connect, Artistry alchemy (Face Painting), Battle of bonds (Chem Debate), Chem Memes, Chem Reels.

# FUN WITH CHEMISTRY-2026

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Faculty And Students Of PG and Research  
Department of Chemistry

Cordially invite you to the Workshop on

## FUN WITH CHEMISTRY

(An Extension Activity)

Pathippaga Chemmal K Ganapathy Government  
Higher Secondary School.

**6<sup>th</sup> February 2026,  
9:00 AM - 3:00 PM**

**Seminar Hall First Floor And  
Department Of Chemistry**

**CO-ORDINATORS**

**Dr. A. Vijayaraj**  
Assistant Professor  
Department of Chemistry

**Dr. P. Tamizhdurai**  
Assistant Professor  
Department of Chemistry

**Dr. R. Kumaran**  
Associate Professor & Head  
Department of Chemistry

**Dr. S. Santhosh Baboo**  
Principal

**Shri Ashok kumar Mundhra**  
Secretary

The Department of Chemistry, DGVC College is delighted to present “Fun with Chemistry -2026,” an upcoming academic fest designed to ignite curiosity and enthusiasm for Chemical sciences. This event aims to transform learning into an engaging experience by blending scientific concepts with creativity, innovation, and hands-on exploration.

**Fun with Chemistry 2026** will provide a vibrant platform for students to showcase their skills through interactive demonstrations, experimental activities, and intellectually stimulating sessions. The event emphasizes experiential learning, encouraging participants to explore chemistry beyond textbooks and appreciate its role in everyday life.

## STUDENT SPOTLIGHT AND COMPETITION

Our students have demonstrated exceptional talent and dedication across a wide spectrum of academic competitions, creative arts, and technical workshops. This newsletter celebrates their recent accomplishments and commitment to continuous learning. Our students secured numerous podium finishes at inter-college and university-level events, showcasing their expertise in Chemistry, general knowledge, and the arts.



# **ACADEMIC & CREATIVE COMPETITION WINNERS**

## **OVERALL WINNERS OF CTTE INTERCOLLEGIATE EVENT - 2025**



## **OVERALL RUNNERS OF LOYOLA INTERCOLLEGIATE EVENT - 2025**



| <b>Student Name</b>    | <b>Top Achievements &amp; Awards</b>   | <b>Awarding Agency</b> |
|------------------------|--|------------------------|
| S. Nivedhitha          | 1st Prize: JAM; 2nd Prize: PG Quiz & Poster Presentation   | Loyola College, CTTE   |
| S.R. Lakshmanan        | 3rd Prize: Poster Presentation & Chem Rangoli  | Loyola College, CTTE   |
| Rithika.K              | 1st Prize: Chem Collage & 2nd Prize: Chem Memes; 3rd Prize: Face Painting                        | CTTE, Anna University  |
| Preethi.R              | 1st Prize: Wealth out of Waste; 2nd Prize: Chem Collage & Face Painting                          | CTTE                   |
| V. Sugeshwaran         | 1st Prize: Chem Charades; 2nd Prize: Chem Reels; 3rd Prize: Chem Memes                           | CTTE, Loyola College   |
| B. Pavithra            | 1st Prize: Chem Charades; 2nd Prize: Face Painting   | CTTE                   |
| R. Samyuktha           | 1st Prize: Chem Collage  | CTTE                   |
| A. Gayathri            | Best Award: Poster Presentation; 2nd Prize: Potpourri & Chem Rangoli                             | MCC, Loyola College    |
| S. Monesh Kumar        | 2nd Prize: Chem Charades & Cooking Without Fire; 3rd Prize: Food Trivia, Chem Quiz, Chem Rangoli | CTTE, Loyola College   |
| Harini.H               | 2nd Prize: Chem Charades; 3rd Prize: Food Trivia, Chem Quiz, Chem Rangoli                        | CTTE, Loyola College   |
| Ramya. V               | 2nd Prize: Chem Rangoli ; 2nd Prize: cooking without fire  | Loyola College         |
| Muthu Pappa Saranya .G | 2nd Prize: Chem Rangoli  | CTTE                   |
| Nishanth.R             | 2nd Prize: chem reel ; 3rd Prize: face painting  | CTTE                   |
| Charan Raj . S         | 2nd Prize: potpourri; 3rd Prize: Food trivia   | Loyola college         |
| Preethi.G              | 2nd Prize: Potpourri ; 3rd prize : Surprise Event  | Loyola College         |
| Tejashwini.S           | 3rd Prize: Surprise Event  | Loyola College         |
| Subha Shree. P         | 2nd Prize: PG Quiz ; 2nd prize :Chem Rangoli   | Loyola college         |

## Chemistry Excellence at the National Level

We are thrilled to celebrate the remarkable achievement of our students, **Mr. S.R. Lakshmanan** and **Ms. K. Rithika** who have been officially recognized for their outstanding performance in the Quizonva competition!

**Mr. S.R. Lakshmanan** (First prize) and **Ms. K. Rithika** secured the title of Runner in "Quizonva," a specialized quiz focused on Environmental Pollution. This competitive event was designed specifically for Masters Students in Chemistry, testing deep technical knowledge and a commitment to environmental science.

The recognition was part of the prestigious INYAS Technical Symposium on "Advances in Science and Technology for Sustainable Future (ASTSF-2025)." Organized by: The Indian National Young Academy of Science (INYAS) Hosted by: Vellore Institute of Technology (VIT), Vellore. Collaborators: The event featured support from major bodies including BARC, ICSSR, and the Department of Science & Technology, Govt. of India.



We are thrilled to celebrate the remarkable academic achievement of our student, **A. Hajara Banu**, who recently reached the Final Stage of the prestigious "Precise Energy 2025" Olympiad.

This international-level competition, organized by "Energy of the Future" in cooperation with the National Research Nuclear University (MEPhI) and powered by Rosatom, is a rigorous test of scientific knowledge and problem-solving skills. She competed against some of the brightest young minds in the Kudankulam NPP region.

### **Specialized Workshops & Technical Training**

To bridge the gap between theory and practice, students participated in high-level technical workshop at premier institution. Glass Blowing Workshop at IIT-Madras.

A large cohort of students gained hands-on experience in the specialized art of glass blowing, essential for laboratory instrumentation. Participants included: **Harini.H, S. Priyanka, S. Tejashwini, S. Charan Raj, V. Sugeshwaran, S. Monesh Kumar, Roshan.R, Monisha.K, Sri Harikrishnan.R, Sri Devi.R, Rithiyka.A, Karuna.M, Rohinth Kumar.R, Sathya Priya.R, and Shanmugavel.T.**

### **Spectroscopy & Molecular Materials**

Students engaged in advanced analytical training at IIT-Madras: Hands-on Training on Spectroscopies: Attended by **Samyuktha.R, Dhadchayani.M, Preethi.R, Subhashree.P, Harini.D, and Nivedhitha.S.**

### **Molecular Materials and Functions Workshop:**

Attended by **Samyuktha.R and Dhadchayani.M**

**Competitive Exam Preparation:** **Harini.D** was one among the 30 students selected to attend the CSIR-NET Workshop at IISER Thiruvananthapuram to further her academic career goals.



# CONFERENCE PRESENTATIONS & PROFESSIONAL DEVELOPMENT INTERNATIONAL EXPOSURE:

Postgraduate students of the Department of Chemistry actively participated in international academic forums and successfully presented research papers at an International Conference hosted by Women's Christian College. This exposure provided students with a valuable platform to showcase their research work, engage with eminent scholars and researchers from diverse institutions, and gain insights into current advancements in chemical sciences.



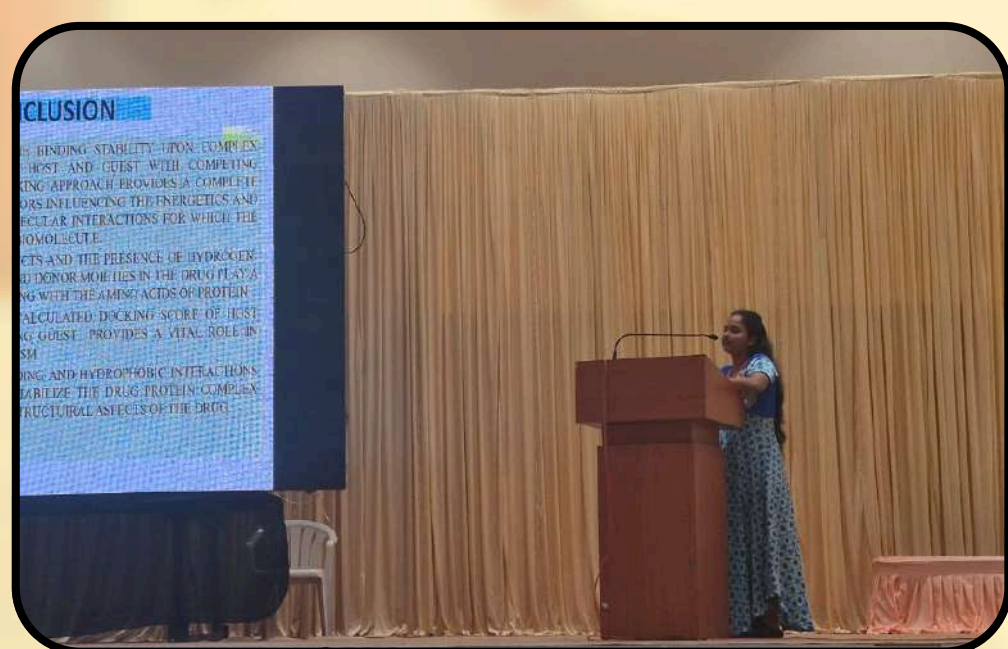
**H.HARINI**



**S.MONESH KUMAR**



**G.APRAMEYA**



**R.KEERTHIKA**



**S.R.LAKSHMANAN**



**C.RAMYA**



**M.YOGALAKSHMI**



**A.GAYATHRI**



**R.PREETHI**

## WORKSHOP VISIT

A hands-on workshop organized in collaboration with the Central Institute of Petrochemicals Engineering & Technology (CIPET) provided students with valuable exposure to the rapidly evolving field of polymer science and plastics engineering. CIPET, a premier national institution under the Ministry of Chemicals & Fertilizers, Government of India, plays a pivotal role in skill development, research, and technological advancement in the petrochemical sector.

### II-MSc Students



### I-MSc & I-BSc Students



## RESEARCH CONCLAVE

“The Department proudly hosted a Research Conclave on Research Ethics in collaboration with the Internal Quality Assurance Cell (IQAC) under the banner of Research and Development Cell (RDC).” The event underscored the significance of ethical integrity and quality assurance in research, fostering a culture of responsible and transparent scholarly practices.” “Designed specifically for faculty, the conclave facilitated insightful deliberations on quality assurance, responsible research conduct, and academic accountability.”



### ORGANIZING TEAM OF THE CONCLAVE WITH OUR PRINCIPAL AND CONVENOR OF RDC



## ACADEMIC ACHIEVEMENTS AND RESEARCH

### MSc Projects as Publications

"We are proud to announce that several MSc projects have been successfully transitioned into formal publications in reputed journals,

"A special commendation to our students—**Akshaya.M, Chandraja.B, Anand.C, Nithya.P, Dharshini.A, Iswarya.S, Vinodhini.R , Sukesh Babu.K and Vijayalakshmi.R**—for their contributions to these scholarly works."

### Student Progression

" For the 2022-25 batch, a distinct trend emerged in the career progression of UG Chemistry students: a higher proportion of male graduates entered the workforce immediately, while female students increasingly prioritized postgraduate studies. Many graduates secured admissions at prestigious institutions such as RKM Vivekananda College, DG Vaishnav College, and VIT. On the professional front, Zuari Cements and various private firms were the primary recruiters for those entering industry.

At the postgraduate level, career paths are notably diverse. PG Chemistry alumni have transitioned into teaching and R&D roles at institutions like SRM (Kattankolathur and Ramapuram campuses) and the Application Engineering Lab. Furthermore, there is a strong interest in public service, with several students pursuing government roles or preparing for the UPSC examinations.



M. AKSHAYA



B. CHANDRAJA



S. ISWARYA



A. DHARSHINI



P. NITHYA



R. VINOOTHINI



R. VIJAYALAKSHMI



C. ANAND



K. SUKESH BABU



N. SANJAY

## RESEARCH SCHOLARS PUBLICATIONS (2024-2025)

"The 2024-25 academic year has been prolific for our research scholars. We acknowledge the published works of the scholars under the guidance of:

- **DR. KUMARAN :** R. Keerthiga, Shreya Haridas, M. Yogalakshmi, S. Rajesh, Seba Merin Vinod , M.S. Sangeetha.
- **DR. M. VANJINATHAN :**A. Gopalakrishnan, V. Rajagopalan, R. Ramesh Kumar.
- **DR. T. AUGUSTINE:** T. Jayamani, Edel Queen.
- **DR. R. VASANTHI:** S. Dinakaran, M. Swedha, N. Anuradha, K. Kavitha.



M.S.Sangeetha



Seba Merin Vinod



R.Keerthiga



T.Jayamani



Mrs.N.Anuradha



S.Dhinakaran



Shreya Haridas



M. Yogalakshmi



K. Kavitha



M.Swedha

## **RECORD ENROLLMENT & RECENT DOCTORATES**

The Department currently leads with 16 enrolled research scholars guided by five supervisors recognized by University of Madras. Additionally, two Ph.D. degrees were awarded in the 2025–2026 academic year.

Further **Mr. A. Gopalakrisnan, Mr. T. Jayamani and Mrs. M. S. Sangeetha** have submitted their doctoral theses and are awaiting for viva. **Mr. R. Ramesh Kumar** has submitted his Phd Synopsis.



## **QUALIFYING EXAMINATIONS**

We are proud to announce the recent successes of our students in their professional and academic qualifying examinations. These milestones represent significant dedication to their respective fields of study.

| <b>STUDENT NAME</b>   | <b>QUALIFYING EXAMINATION</b>              |
|-----------------------|--|
| <b>N. SANJAY</b>      | <b>CSIR-NET Chemical Science for PhD</b>   |
| <b>C. ANAND</b>       | <b>UGC NET Environment Studies for PhD</b> |
| <b>R. HARIHARAN</b>   | <b>JAM</b>                                 |
| <b>P. SHANMUGAVEL</b> | <b>JAM</b>                                 |

## Publications by the Post Graduate Students 2023-2025 Batch

From groundbreaking bioinformatics research to sustainable energy solutions, our team continues to push the boundaries of scientific exploration.

| Student Name  | Research Topic   | Journal / publications                 |
|---|--|--|
| <b>R.Vijayalakshmi,<br/>S.Iswarya,K.Sukesh<br/>Babu</b> | <b>Myoglobin Inhibiting Drugs</b>                                    | <b>JCHR(2025)</b>                      |
| <b>S.Iswarya,A. Dharshini</b>                           | <b>Dye-sensitized solar cells (DSSC)</b>                             | <b>Next Energy (2025)</b>              |
| <b>K.Sukesh Babu</b>                                    | <b>Analysis of Cough Syrups</b>                                      | <b>YMER(2025 )</b>                     |
| <b>S.Iswarya,<br/>R.Vijayalakshmi</b>                   | <b>Antibiotics &amp; Beta Lactoglobulin</b>                          | <b>J. Dalian Univ .<br/>Tech(2025)</b> |
| <b>B Chandraja</b>                                      | <b>carbonic anhydrase inhibiting enzymes</b>                         | <b>JHCR(2025)</b>                      |
| <b>M. Akshaya</b>                                       | <b>Antibiotics with myoglobin and<br/>competitive guest material</b> | <b>RJPT(2026)</b>                      |

### INNOVATION IN SUSTAINABILITY

**A. Sujithraj** (B.Sc, Batch 2021-24) has contributed significantly to the field of green energy. His research explores the conversion of plastic waste into usable fuel, a critical step toward a circular economy.

**Research Title:** Renewable energy from waste plastic: **Hydroprocessing of mixed waste plastics** to diesel fuel utilizing Fe/Mo-Al:Os catalyst

Publication: Process Safety and Environmental Protection, Volume 193, January 2025.

### HEALTHCARE AND CONSUMER INSIGHTS

**Aprameya Ganesh** (B.Sc, Batch 2022-25) has published an insightful analysis of pharmaceutical trends and consumer safety. By examining the chemical components of common medications, this work provides valuable clarity on public health impacts.

**Research Title:** An Exploration and Analysis on the Usage of Various Cough Syrups Based on the Role of Active Chemical Ingredient and its Impact Influencing the Consumers.

Publication: YMER, Volume 24, Issue 08, August 2025.

## Recent Ph.D. Scholars Research Publications

We are proud to showcase the latest academic achievements of our Ph.D. scholars. Their dedication to advancing scientific knowledge is reflected in these recent publications across prestigious international journals.

### Advances in Nanomaterials & Green Chemistry

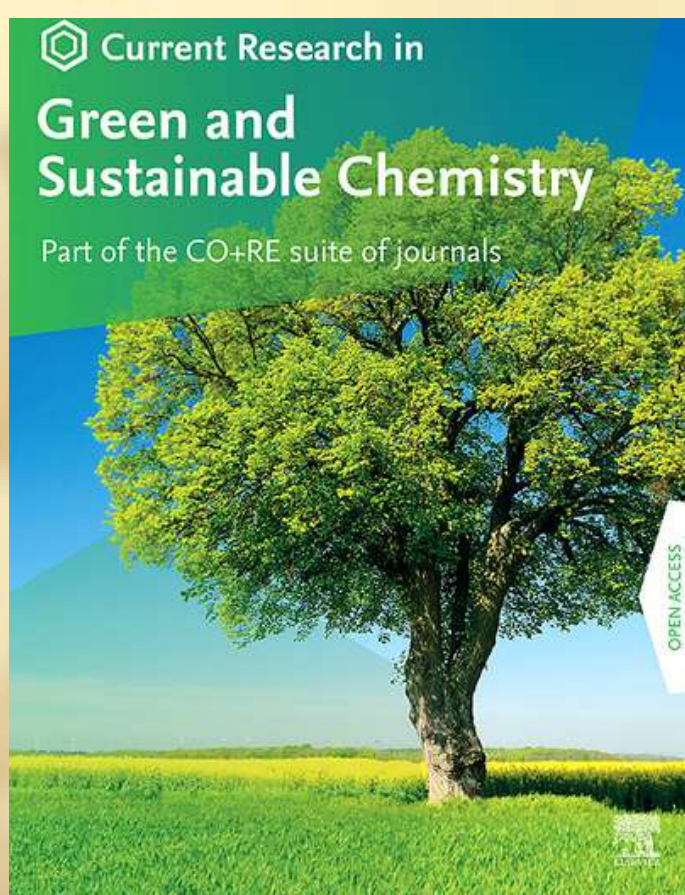
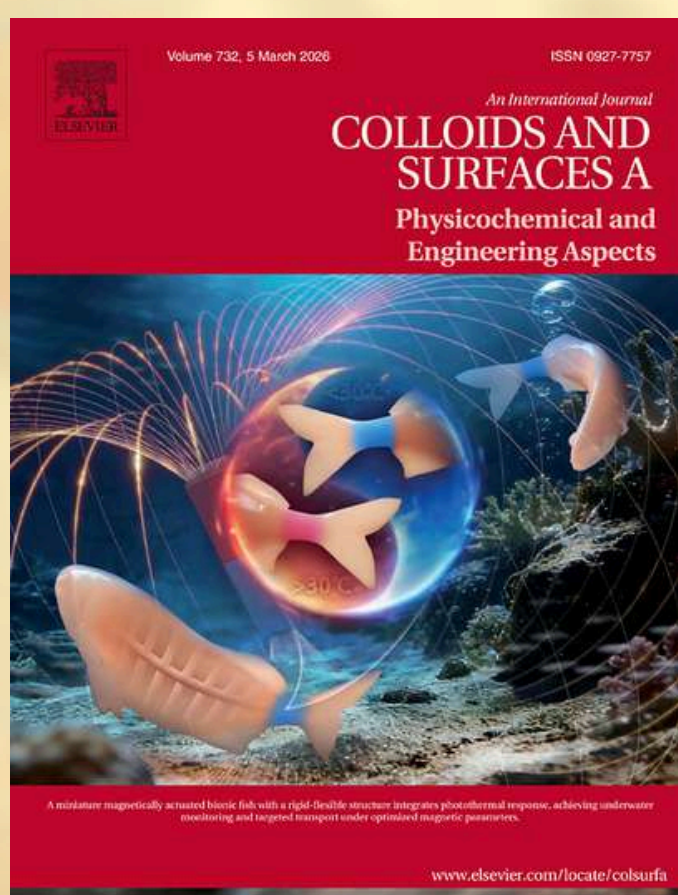
The following scholars have made significant strides in the development and application of bimetallic nanocomposites and metal-organic frameworks:

- **T. Jayamani and Ilakkiya Devi** published research on phyto-fabricated Pd&Ag bimetallic nanocomposites using papaya leaf extract, creating a dual-functional platform for catalysis and antimicrobial defense in *Current Research in Green and Sustainable Chemistry* (June 2025).
- **T. Jayamani** also explored the green synthesis of Pt\Ag bimetallic nanoparticles for catalytic dye reduction and antimicrobial activity, featured in the *Asian Journal of Chemistry* (June 2025).
- **Kavitha Karuppiah, Anushree Raju, Anuradha Natarajan, Swedha Mohan, and Dhinakaran Subramani** contributed to *Results in Chemistry* (March 2025) with their work on dye sensitized photocatalytic degradation using Benzenetricarboxylic acid-based metal-organic frameworks under visible light.

### Energy Storage & Materials Science

Innovation in sustainable energy solutions remains a key focus of our research community:

- **Anuradha Natarajan, Swedha Mohan, Dhinakaran Subramani, and Kavitha Karuppiah** published findings on a monoclinic  $\text{Ni}_2\text{ZnMoO}_6$  double perovskite material designed for effective quasi-solid state supercapacitors in *Colloids and Surfaces A* (January 2024).



# BIOPHYSICAL CHEMISTRY & MOLECULAR INTERACTIONS

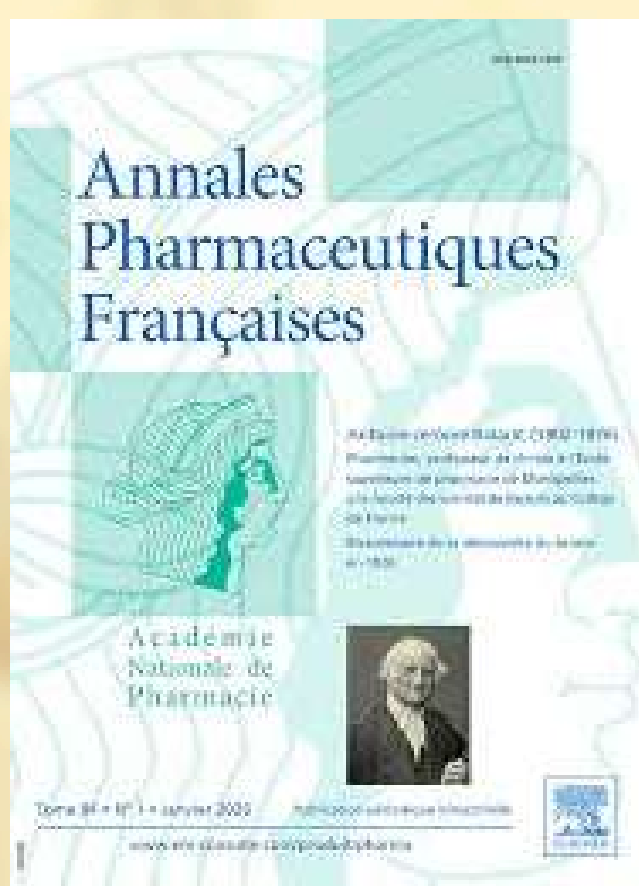
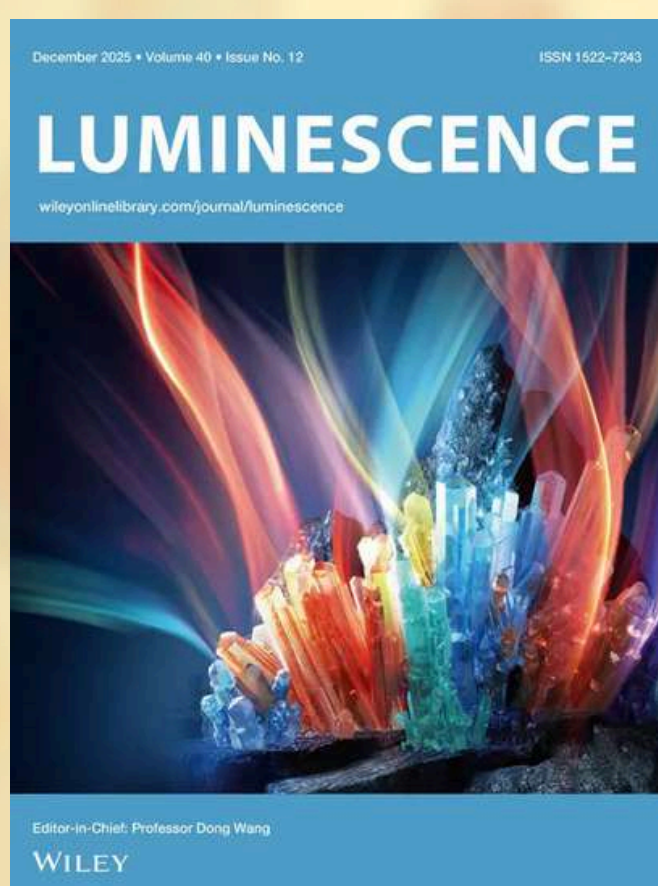
Our scholars are deepening the understanding of molecular dynamics and drug interactions:

- **R. Keerthiga** investigated the binding dynamics of bovine serum albumin with antibiotics and acridinedione dye, published in *Annales Pharmaceutiques Françaises* (June 2025).
- **Seba Merin Vinod and M.S. Sangeetha** conducted a combined photophysical and theoretical study on the interaction of Lactose with Resorcinol-based dyes, appearing in *Luminescence* (2025).

# BIOINFORMATICS & COMPUTATIONAL MODELING

Utilizing advanced computational approaches, our researchers are mapping complex biological affinities:

- **Sambath Rajesh and Manoharan, Yogalaxshmi** explored the energetics and intermolecular interactions of Myoglobin inhibiting drugs in the *Journal of Chemical Health Risks* (JCHR) (2025).
- **Sambath Rajesh** further published a molecular docking study on the binding affinity of antibiotics with Beta Lactoglobulin ( $\beta$ -Lg) in the *Journal of Dalian University of Technology* (2025).



## PUBLICATIONS BY THE POST GRADUATE STUDENTS

| Student Authors                                | Journal                                       | Research Title  |
|--|---|---|
| C. Anand, B. Chandraja, P. Nithiya, M. Akshaya | International Journal of Hydrogen Energy      | Green hydrogen for a sustainable future: A review of production methods, innovations, and applications  |
| R. Vedavalli, S. Santhosh                      | Fuel  | Maritime decarbonization: Alternate marine fuel from hydroprocessing of waste plastics  |
| R. Vedavalli, S. Santhosh                      | Fuel  | A state-of-the-art review of multilayer packaging recycling: Challenges, alternatives, and outlook  |
| R. Vedavalli, S. Santhosh                      | Process Safety and Environmental Protection   | Sustainable synthesis: High-efficiency ZrO <sub>2</sub> /KIT-6 catalyst to hydroprocess waste plastics into fuels   |
| N. Gayathri                                    | Arabian Journal of Chemistry                  | Fe-Ni bimetallic supported on mordenite catalyst for selective oxidation of veratryl alcohol in a continuous reactor  |
| H. Yogesh, G. Pooja, M. Madhan Kumar           | South African Journal of Chemical Engineering | Isolation of carminic acid from essential oil, its characterization and applications towards replacing toxic colourants used in soaps   |
| G. Madhanagopal                                | Carbon Trends                                 | Effect of a bimetal Mn/Zn catalyst supported on activated carbon for selective oxidation of ethyl lactate to ethyl pyruvate   |
| R. Vedavalli                                   | Process Safety and Environmental Protection   | Catalytic conversion of plastic waste into diesel fuel through pyrolysis and hydroprocessing  |
| P. Jayapradha                                  | Journal of Saudi Chemical Society             | Continuous processing of JP-10 production: Hydroisomerization of endo-tetrahydrodicyclopentadiene to exo-tetrahydrodicyclopentadiene using a novel bimetal catalyst of Ba/Se supported on TiO <sub>2</sub> /SO <sub>4</sub> |
| A. Hariharan                                   | Molecular Catalysis                           | Zn/Ni catalyst facilitates the oxidation of ethyl lactate to ethyl pyruvate by selective progressions on mesoporous SBA-15 support by a continuous processing approach  |
| S. Purushothaman                               | Journal of Saudi Chemical Society             | Selective oxidation of veratryl alcohol to veratraldehyde using more active catalyst in a continuous reactor  |

## FACULTY EXCELLENCE AND PROFESSIONAL RECOGNITION

### Dr. R. Kumaran

- **Institutional Representation:** Acted as a RAC member for Tamil Nadu Open University (13.06.2025).
- **Technical Expertise:** Served as a resource person for an invited talk and as a judge for oral and poster presentations at Madras Christian College (19.12.2025).



### Dr. T. Augustine Arul Prasad

- **Academic Leadership:** Served as an External Member for Academic Audits at prestigious institutions including Anna Adharsh College (05.05.2025), Stella Maris College (01.08.2025), Avichi College (05.08.2025), and Madras Christian College (26.11.2025).
- **Subject Expertise:** Provided expert guidance for Board of Studies at Islamaiaya College for Women (14.07.2025) and Arcot Sri Mahalakshmi Women's College (16.07.2025).
- **Resource Person & Speaker:** Led numerous Faculty Development Programs (FDP) and seminars at institutions such as Ethiraj College for Women, Patrician College, and Sri Kalishwari College. Most recently, conducted an FDP at Sourashtra College, Madurai on 06.01.2026.
- **Certification:** Successfully completed the three credit courses in Integration Of Artificial Intelligence In Educational Practices, AI Teacher Training certification by Agnirva and Skilling Course on Disruptive Methodologies From Conventional Technologies To Green Technologies.



### Dr. R. Vasanthi

**Research Mentorship:** Served as an External Examiner for Ph.D. Viva Voce at Presidency College on two occasions (28.07.2025 and 10.12.2025).



### Dr. P. Tamizhdurai

**Innovation in Science:** Delivered a session as a Resource Person on "Hydrogen 2.0: Advanced Production Technologies and the Future of Clean Applications" at CTTE College (20.12.2025).



## NEW INTERNATIONAL PUBLICATION

We would like to extend our congratulations to **Dr. A Vijayaraj** for his significant contribution to the field of environmental science. His work has been published in a globally recognized venue, showcasing our faculty's impact on the international stage.



**Publication Title:** Inorganic Nanosheets-Based Photocatalysis: Recent Insights into Water Purification Application.

**Scope:** International (Taylor and Francis)

This research offers vital insights into sustainable water purification technologies, reflecting a commitment to addressing critical global challenges.

## Overview of Reviewer Recognitions

Our faculty members have served as reviewers for a wide range of prestigious international journals and awarding agencies throughout 2025 and early 2026.

| FACULTY MEMBER                      | KEY REVIEWER ROLES AND AGENCIES  |
|-------------------------------------|--|
| <b>Dr. R. Kumaran</b>               | <b>Heliyon, Bioresource Technology, Int. J. Hydrogen Energy, Biosensors and Bioelectronics, Chemical Engineering Journal, Fuel, and Spectrochimica Acta Part A</b> |
| <b>Dr. T. Augustine Arul Prasad</b> | <b>Pharmacological Research - Modern Chinese Medicine and Chemistry Select.</b>  |
| <b>Dr. P. Tamizhdurai</b>           | <b>Chemical Engineering Journal, Springer Nature, and Journal of Industrial &amp; Engineering Chemistry.</b>   |
| <b>Dr. R. Vasanthi</b>              | <b>Letters in Applied Microbiology.</b>  |
| <b>Dr. A. Subramani</b>             | <b>Journal of Molecular Structure.</b>   |

## **New Patent Published: Advances in Anti-Diabetic Research**

We are proud to announce the publication of a significant patent by Dr. P. Tamizhdurai and Dr. A. Subramani. Their research focuses on the **Development of Chromone-Dihydropyrimidinone Derivatives**, which serves as a novel scaffold for the creation of **Anti-Diabetic Agents**.

- **Application Number:** 202441079944
- **Publication Date:** June 25, 2025

## **International Project Grant Success**

In a testament to our global research footprint, a major project has been selected for funding under the **First Grant Cycle 2025**.

- **Project Reference:** No. 24069-ksu-2023-KSU-B-3-1-E
- **International Collaboration:** Dr. P. Tamizhdurai has been appointed as a **Consultant** for this project.
- **Funding Body:** This initiative is supported by the **RDIU grant, Saudi Arabia**.

## **Faculty Professional Development Highlights**

We are proud to celebrate our faculty members who have recently completed advanced training and refresher courses. These programs ensure our educators stay at the forefront of scientific research and pedagogical excellence.

## **Recent Course Completions**

- **Dr. R. Vasanthi** completed a 14-day **Refresher Course in Physical Science (Interdisciplinary)** held from May 13 to May 26, 2025.
- Dr. R. Vasanthi also participated in the **1st Faculty Development Program (FDP) on Rietveld Refinement of X-Ray Diffraction (RRD)** for 7 days in July 2025.
- **Mr. V. Rajagopalan** completed a 14-day **UGC-sponsored offline refresher course in Material Science**. The program was hosted by the UGC-Malaviya Mission Teacher Training Centre at Bharathidasan University, Tiruchirappalli.
- **Dr. R. Mythily** attended the **UGC-sponsored online Refresher course in Basic Sciences (ID)**. This 14-day program, themed "**Recent trends in Basic sciences**," was conducted by the UGC-Malaviya Mission Teacher Training Centre at MK University in November 2025.

## RESEARCH EXCELLENCE & DEPARTMENTAL MILESTONES

### A legacy of Academic Leadership

- **Premier Research Hub:** Our Department credits the tag of more number of Research Supervisors in the Science stream across the entire college.
- **Distinguished History:** Since being elevated to a Research Department in 2000, the department have successfully produced 20 PhD graduates till 2025.
- **Recent Milestones:** The momentum continues with four doctoral theses recently submitted and two candidates successfully awarded their degrees.

### Faculty citations & Global Impact

- **Top-Tier Recognition:** **Dr. P. Tamizhdurai** has the highest citations followed by highest number of publications in the entire college. **Dr. R. Kumaran** ranks number 3 in terms of citations and publications in the overall college. Among the Female faculty members, **Dr. R. Vasanthi** and **Dr. N. Vidhyalakshmi** are ranked among the top five faculty members for overall citations in the college.
- **Prestigious Honors:** We are proud to announce that **Dr. R. Vasanthi** and **Dr. N. Vidhyalakshmi** received the **SheRNI** Award for the year 2025 based on the citations and publications.



- **High-Impact Research:** Dr.P.Tamizhdurai has a h index of **30**, the highest in the institution followed by 10 faculty members having h index above **5**. ( **Dr. R. Kumaran-17, Dr. N. Vidhyalakshmi-12, Dr.A.Subramani-11, , Dr.M.Vanjinathan-9, Dr.R.Vasanthi-9, , Dr.C.Kavitha-9, Dr.A.Vijayaraj-9, Dr.T.Augustine Arul Prasad-8 and Dr.R.Mythily-6**)



**Dr. P. Tamizhdurai**



**Dr. R. Kumaran**



**Dr. N. Vidhyalakshmi**

## Scholarly Output & Contributions

- **100% Publication Rate:** In a remarkable feat of consistency, every faculty member published at least one research article in SCOPUS indexed journal during the academic year 2025.
- **Institutional Dominance:** The department boasts, as six faculty members are in the institution's top ten publications. They are Dr.P.Tamizhdurai (120), Dr.R.Kumaran (75), Dr.A.Subramani (46), Dr.C.Kavitha (32), Dr.R.Vasanthi (30), and Dr.T.Augustine Arul Prasad (28).
- **Seed Money Leadership:** The department stands as the maximum beneficiary towards the contribution towards institutional seed money for publications in the year 2025.

**The Department of Chemistry continues to set the gold standard for academic excellence, emerging as the top contributor in institutional seed money for publications this year. With a total of 11 faculty beneficiaries, the department has successfully utilized a cumulative grant of Rs. 1,91,900/- from the management in research initiatives and output.**

### Funding Breakdown:

- **Odd Semester Publications: Rs. 65,900/-**
- **Even Semester Publications: Rs. 70,500/-**
- **Supplementary Research Support: Rs. 55,500/-**



Dr.T.Augustine Arul Prasad & Dr. P. Tamizhdurai received the Project Seed Grant (2025–2026) on 5<sup>th</sup> October 2025, in recognition of his academic contributions, coinciding with the celebration of International Teachers' Day.



Dr. P. Tamizhdurai, Dr. R. Kumaran, and Dr. A. Subramani received appreciation from Dr. S. Santhosh Baboo, Principal, for publishing a research article in the Chemical Engineering Journal with a **high impact factor of 14** during May 2025.

## DEPARTMENTAL UPDATES

### LEADERSHIP & TRANSITION

"We recently marked a significant milestone with the official Change of HOD ceremony. We welcome the new leadership and the induction of our new staff members into the department family."



**DR. R. KUMARAN**  
**ASSOCIATE PROFESSOR & HEAD**  
**DEPARTMENT OF CHEMISTRY**



**Mr. A. GOPALAKRISHNAN**  
**ASSISTANT PROFESSOR**  
**DEPARTMENT OF CHEMISTRY**

### MEET OUR NEW FACULTIES



**DR. T. NANDHINI**  
**ASSISTANT PROFESSOR**  
**DEPARTMENT OF CHEMISTRY**



**DR. A. SUBRAMANI**  
**ASSISTANT PROFESSOR**  
**DEPARTMENT OF CHEMISTRY**

# Chemistry Department: Leading the Research Front

**Dwaraka Doss Goverdhan Doss Vaishnav College**  
(Autonomous)  
Re-accredited with A++ Grade by NAAC (3rd Cycle)  
College with Potential for Excellence, Linguistic Minority Institution  
Affiliated to the University of Madras, Arumbakkam, Chennai - 600 106, Tamilnadu, India.

**LIBRARY**

**DDGDVC - IRINS (Indian Research Information Network System)**  
Incampus Top 10 Profiles (Citation Based as on 07.01.2026)

|  |  |   |
|--|--|---|
| <br><b>Dr. P. Tamizhdurai</b><br>Assistant Professor<br>Department of Chemistry.                | <br><b>Dr. R. Sivaraman</b><br>Associate Professor<br>Department of Mathematics.    | <br><b>Dr. R. Kumaran</b><br>Associate Professor & Head<br>Department of Chemistry.            |
| <br><b>Dr. R. Vasanthi</b><br>Assistant Professor<br>Department of Chemistry.                  | <br><b>Dr. N. Vidhyalakshmi</b><br>Assistant Professor<br>Department of Chemistry. | <br><b>Dr. K. Annapoorani</b><br>Assistant Professor<br>Department of Physics with Comp. App. |
| <br><b>Dr. G. Sriram Prasath</b><br>Assistant Professor<br>Department of Biochemistry.        | <br><b>Dr. G. Shoba</b><br>Assistant Professor<br>Department of Biotechnology.    | <br><b>Dr. A. Vijayaraj</b><br>Assistant Professor<br>Department of Chemistry.               |
| <br><b>Dr. T. Sivaranjani</b><br>Assistant Professor<br>Department of Physics with Comp. App. | <b>CONGRATULATIONS ON THIS WELL - EARNED RECOGNITION.</b>  |   |
| <b>Dr. M. Mani</b><br>Librarian  | <b>Dr. S. Santhosh Baboo</b><br>Principal  | <b>Shri. Ashok Kumar Mundhra</b><br>Secretary   |

<https://linktr.ee/ddgdvclibrary>

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Arumbakkam, Chennai - 600 106, Tamilnadu, India.

**LIBRARY**

**DDGDVC - IRINS (Indian Research Information Network System)**  
Incampus Top 10 Profiles (Citation Based as on 23.01.2025)

|   |   |   |
|---|---|---|
| <br><b>Dr. P. Tamizhdurai</b><br>Assistant Professor<br>Department of Chemistry.             | <br><b>Dr. M. D. Balakumaran</b><br>Assistant Professor & Head<br>Department of Biotechnology. | <br><b>Dr. R. Sivaraman</b><br>Associate Professor<br>Department of Mathematics. |
| <br><b>Dr. T. Velmurugan</b><br>Associate Professor<br>Department of MCA.                   | <br><b>Dr. R. Vasanthi</b><br>Assistant Professor<br>Department of Chemistry.                 | <br><b>Dr. R. Kumaran</b><br>Associate Professor<br>Department of Chemistry.    |
| <br><b>Dr. S. Vaithyasubramanian</b><br>Assistant Professor<br>Department of Mathematics.  | <br><b>Dr. V. Sangeetha</b><br>Assistant Professor<br>Department of Physics.                 | <br><b>Dr. A. Vijayaraj</b><br>Assistant Professor<br>Department of Chemistry. |
| <br><b>Dr. T. Augustine Arul Prasad</b><br>Associate Professor<br>Department of Chemistry. | <b>CONGRATULATIONS ON THIS WELL - EARNED RECOGNITION.</b>   |   |
| <b>Dr. M. Mani</b><br>Librarian   | <b>Dr. S. Santhosh Baboo</b><br>Principal   | <b>Shri. Ashok Kumar Mundhra</b><br>Secretary   |

<https://linktr.ee/ddgdvclibrary>      <https://ddgdvclibrary.blogspot.com>

The Chemistry department at Dwaraka Doss Goverdhan Doss Vaishnav College (DDGDVC) has achieved a major milestone in the latest IRINS (Indian Research Information Network System) rankings. The department secured exactly half of the institution's top 10 in-campus profiles based on citations 2025-26.

This rare accomplishment highlights the department's academic dominance within a multi-disciplinary setting among other departments. By occupying 50% of the top-cited spots, the faculty has demonstrated a high volume of impactful research and global recognition, setting a new benchmark for scholarly excellence at the college.

## FACULTY RESEARCH PROFILE

| <b>Faculty</b>              | <b>Designation</b>    | <b>Citations</b> | <b>Publications</b> | <b>h-index</b> |
|-----------------------------|-----------------------|------------------|---------------------|----------------|
| Dr. R.Kumaran               | Associate Prof & Head | <b>1030</b>      | <b>75</b>           | <b>17</b>      |
| Mr. A.Gopalakrishan         | Assistant Professor   | <b>34</b>        | <b>4</b>            | <b>2</b>       |
| Dr. T.Augustine Arul Prasad | Associate Professor   | <b>355</b>       | <b>31</b>           | <b>8</b>       |
| Dr. M.Vanjinathan           | Associate Professor   | <b>233</b>       | <b>24</b>           | <b>9</b>       |
| Dr. R.Vasanthi              | Assistant Professor   | <b>717</b>       | <b>30</b>           | <b>9</b>       |
| Mr. V.Rajagopalan           | Assistant Professor   | <b>54</b>        | <b>5</b>            | <b>2</b>       |
| Dr. N.Vidyalakshmi          | Assistant Professor   | <b>571</b>       | <b>21</b>           | <b>12</b>      |
| Dr. A.R.Naresh Raj          | Assistant Professor   | <b>36</b>        | <b>6</b>            | <b>3</b>       |
| Dr. C.Kavitha               | Assistant Professor   | <b>260</b>       | <b>32</b>           | <b>8</b>       |
| Dr. R.Mythily               | Assistant Professor   | <b>94</b>        | <b>18</b>           | <b>6</b>       |
| Dr. P.Tamizhdurai           | Assistant Professor   | <b>2,527</b>     | <b>120</b>          | <b>30</b>      |
| Dr. A.Vijayaraj             | Assistant Professor   | <b>310</b>       | <b>20</b>           | <b>9</b>       |
| Dr.V.Shyamala Devi          | Assistant Professor   | <b>23</b>        | <b>3</b>            | <b>1</b>       |
| Dr. A.Subramani             | Assistant Professor   | <b>429</b>       | <b>46</b>           | <b>12</b>      |
| Dr. T.Nandhini              | Assistant Professor   | <b>65</b>        | <b>8</b>            | <b>4</b>       |

## **EDITOR IN CHIEF**

DR. R. KUMARAN  
ASSOCIATE PROFESSOR & HEAD

## **SUB-EDITOR**

DR. R. MYTHILY

## **STUDENT EDITORS**

SUGESHWARAN.V

HARINI. H

CHARAN RAJ.S

VARUN.P

## **STUDENT SUB- EDITORS**

KIRUTHIKA.T.V

SIDDIQUA BEGUM. K

GOPIKA.M

SINDHUJA. G

## **CONTRIBUTING EDITORS**

MR. A. GOPALAKRISHNAN, ASSOCIATE PROFESSOR

DR. T. AUGUSTINE ARUL PRASAD, ASSOCIATE PROFESSOR

DR. M. VANJINATHAN, ASSOCIATE PROFESSOR

DR. R. VASANTHI, ASSISTANT PROFESSOR

MR. V. RAJAGOPALAN, ASSISTANT PROFESSOR

DR. N. VIDHYALAKSHMI, ASSISTANT PROFESSOR

DR. A. R. NARESH RAJ, ASSISTANT PROFESSOR

DR. C. KAVITHA, ASSISTANT PROFESSOR

DR. P. TAMIZHDURAI, ASSISTANT PROFESSOR

DR. A. VIJAYARAJ, ASSISTANT PROFESSOR

DR. V. SHYMALA DEVI, ASSISTANT PROFESSOR

DR. A. SUBRAMANI, ASSISTANT PROFESSOR

DR. T .NANDHINI, ASSISTANT PROFESSOR

# BIDDING FAREWELL



## “FROM LEGACY TO LEADERSHIP”

WITH HEARTFELT GRATITUDE WE THANK DR. K. PREMALATHA FOR YEARS OF EXEMPLARY SERVICE AS FORMER HEAD OF THE DEPARTMENT.

ACADEMIC YEAR 2025-2026

