

Name: Dr.G.K.AYYADURAI	Photo 			
Designation:	Professor			
Qualification:	M.Sc., M.Phil., Ph.D., PGDCA			
Area of specialization:	Chemistry			
Experience:	Industrial Experience		Teaching Experience	
	-		26 Yrs 7 Months	
Number of workshops / FDP attended:	Number of Workshops		Number of FDPs	
	21		19	
Publications:	Conference		Journal	
	National	International	National	International
	08	03	01	26
Books / Book Chapters	02			
Patents:	National		International	
	Published:21 Granted: 01		Published:- Granted: 01	
Professional Body Membership:	<ul style="list-style-type: none"> ★ APTI - Association of Pharmaceutical Teachers of India: Life Member ★ IEEE Membership: Member (#98059000), Madras Section ★ ISTE - Indian Society for Technical Education: Life Member 			

Staff Achievements:**❖ Teaching Contributions:**

- **Innovative Pedagogy:** Expertise in instructional design, student assessment, and academic advising. Employs modern teaching strategies to actively engage students and promote deep learning.
- **Mentorship Programs:** Actively mentors and advises students, facilitating their professional growth, career advancement, and leadership development. Encourages knowledge sharing and fosters networks to support students' academic and professional goals.
- **Student Engagement Initiatives:** Develops and leads collaborative research projects, interdisciplinary initiatives, and real-world applications to enhance student engagement, motivation, and learning outcomes.
- **Laboratory Expertise:** Proficient in a variety of laboratory techniques and instrumentation, ensuring students gain valuable hands-on experience and practical skills.

❖ Research Guidance :

- **Research Advisory Committee Member:** Served as a Research Advisory Committee Member for Ph.D. candidates at **Vinayaka Mission's Research Foundation (Deemed to be University)**.
- **M.Phil. Supervision:** Recognized M.Phil. guide for **Bharathidasan University** and **Periyar University**. Guided and mentored 9 M.Phil. students to completion (7 from Bharathidasan University and 2 from Periyar University).
- **PG Research Supervision:** Supervised over 25 research projects for PG students at the **PG Department of Biochemistry, Meenakshi Chandrasekaran College of Arts and Science, Pattukkottai, Thanjavur**.

- ❖ **Academic Organizations:**
- ❖ **Curriculum Development:**
 - > **BOS Member (Chemistry):** Developed and implemented curricula for undergraduate courses in the Department of Chemistry for Engineering and Technology programs.
 - > **Board Chairman (Chemistry Board):** Served as the Board Chairman for the Anna University Central Valuation.
- ❖ **Departmental Committees:**
 - > **Scope Member (Organizer):** Contributed as an organizer for the Department of Humanities and Sciences.
 - > **Time Table Coordinator:** Coordinated the timetable for the Department of Science and Humanities for over 12 years.
 - > **Sports Coordinator:** Led the S&H Team (1st Year Students) for over 15 years. Under my guidance, the S&H Department won the overall championship more than 5 times in the annual sports meet.
- ❖ **Service to Profession:**
 - > **Scope Member (Captain):** Actively contributed as Captain for the Disaster Management and Safety Club.
 - > **Scope Member (Captain):** Led the IEEE Nanotechnology Council.
 - > **Exam Cell Member:** Served for more than 4 years as a member of the Exam Cell at our College.
 - > **Exam Cell Coordinator:** Coordinated the Exam Cell for 7 years at **Meenakshi Chandrasekaran College of Arts and Science**, Pattukkottai, Thanjavur.
 - > **HOD, PG Department of Biochemistry:** Served as the Head of the PG Department of Biochemistry at **Meenakshi Chandrasekaran College of Arts and Science**.

- ❖ **Research and Service Achievements:**
 - > **MSME Startup Founder:** Founder of **Sai Organic Pro Plus** (UDYAM Registration No. UDYAM-TN-08-0017217), registered under the Sri Sairam Techno Incubator Foundation, Sri Sairam Engineering College, Chennai-44.
 - > **Pandemic Contribution:** During the COVID-19 pandemic, successfully produced and distributed over 1500 liters of hand sanitizer and more than 500 antiseptic soaps across the Sairam Group of Institutions

- ❖ **Collaborative Research:**
 - > **Consultant:** Provided expertise in the "Synthesis, Characterization, Docking, and DFT for Organic Molecules and Student Projects" at **VASAN R&D Lab** (Project and Consultancy Research).
 - > **Consultant/Advisor:** Offered consulting and advisory

	<p>services for Water and Soil Analysis at Vidveda Ornaterior Private Limited.</p> <ul style="list-style-type: none"> > Pandemic Initiative: Collaborated with LMES on the design of a portable oxygen-generating device using PSA (Pressure Swing Adsorption) Technology during the pandemic. > Experimental Procedure Development: Prepared the experimental procedure for Fish Meal Analysis for Super Seafood Products Private Limited, Thoothukudi, Tamil Nadu, a sister concern.
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Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc	Chemistry	1994	A.V.M. Sri Pushpam College	Bharathidasan University	67%	I
PG	M.Sc.	Chemistry	1997	Khadir Mohideen College	Bharathidasan University	63%	I
	M.Phil.	Chemistry	2003	Tamil University	Tamil University	68.5%	I
Ph.D.	Ph.D	Chemistry	2014	Bharathidasan University	Bharathidasan University	-	-

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Meenakshi Chandrasekaran College	Lecturer & HOD	12.07.1999	09.01.2007	7	5	28
Tagore Engg. College	Lecturer	10.01.2007	06.02.2008	1	0	25
Sri Sai Ram Engineering College	Sr. Lecturer	07.02.2008	31.07.2012	04	06	24
	Asst. Professor	01.09.2012	31.07.2015	02	10	30
	Associate Professor	01.08.2015	31.05.2019	03	09	30
	Professor	01.06.2019	Till date	05	06	30
Total				25	05	17

Workshops/Seminars attended:

- ★ **One day Technical Workshop on NPTEL Stars** held on 6th July 2025 at SAC Auditorium, IIT Madras.
- ★ **5-day Hands-on Training for Startup Founders** organized by Sairam Techno Incubation Foundation in association with the Department of Information Technology, Sri Sairam Engineering College, Chennai-44, from 24th to 28th June 2024.
- ★ **INUP-i2i Familiarization Workshop on Nanofabrication Technologies** (Online mode), supported by the Ministry of Electronics and Information Technology (MeitY), Government of India, and conducted by the Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore, from 20th to 22nd December 2021.
- ★ **DST-FIST Sponsored Two-Day Workshop on Scanning Electron Microscope** held at Sethu Institute of Technology on 5th and 6th October 2021.
- ★ **Two-Day Workshop on Improving Research & Performance Outcomes** at Elsevier's Zoom Webinar, on Tuesday, 31st August 2021.
- ★ **One-Day Workshop on “Intellectual Property Rights & Innovations”** at Sri Sairam Engineering College, Chennai, on 20th July 2019.
- ★ **One-Day Symposium on SIT-SCIHUM'19** at Sri Sairam Institute of Technology on 28th February 2019.
- ★ **DRDO Sponsored One-Day Workshop on Li-ion Batteries** at SSN College on 18th May 2018.
- ★ **One-Day Workshop on “Advanced Functional Materials (FUNMAT-2017)”** organized by CSIR – Central Electrochemical Research Institute (CECRI), Karaikudi, on 22nd May 2017.
- ★ **One-Day National Workshop on “Advancements in Chemical Sciences”** organized by the Department of Chemistry, Sri Sairam Institute of Technology, Chennai-44, on 18th July 2016.
- ★ **One-Day National Workshop on “Smart Materials – Applications and Characterizations”** organized by CCG, Department of Physics, VIT Vellore, on 27th April 2016.
- ★ **5-Day INUP Hands-on Training Workshop on “Nanofabrication Technologies”** held at IIT Bombay, from 17th to 21st August 2015.
- ★ **One-Day Workshop on “Role of Polymers in Modern Engineering Materials”** organized by the Department of Science & Humanities, Sri Sairam Institute of Technology, Chennai-44, held on 12th December 2013.
- ★ **One-Day Workshop on “Art of Journal and Thesis Writing”** organized by the Department of Research Development, Sri Sairam Engineering College, Chennai-44, held on 19th January 2012.

- ★ **National Seminar on “Environmental Issues and Sustainable Development”** organized by the Department of Civil Engineering, Sri Sairam Engineering College, Chennai-44, held on 11th – 12th November 2013.
- ★ **National Seminar on “Recent Trends in LASER Spectroscopy and its Application (RITILSA-13)”** organized by the Department of Humanities and Sciences (Physics), Sri Sairam Engineering College, Chennai-44, held on 17th October 2013.
- ★ **National Seminar on “Emerging Trends in Solar Energy-2013 (ETSE-2013)”** organized by the Department of Chemistry, B.S. Abdur Rahman University, Vandalur, Chennai, held on 23rd October 2013.
- ★ **State-Level Technical Seminar on “Future Ahead for Nanotechnology”** organized by the Department of Chemistry, Aarupadai Veedu Institute of Technology, held on 9th August 2008.
- ★ **National Seminar on “Nano Science and Technology – Challenges Ahead (NSTCA’08)”** organized by the Department of Chemistry, Velammal Engineering College, in association with IGCAR, Kalpakkam, held on 19th August 2008.
- ★ **Seminar on “Recent Trends in Biochemistry”** organized by the School of Life Sciences, Post Graduate Department of Biochemistry, Ponnaiyah Ramajayam College, Thanjavur, held on 23rd August 2003.
- ★ **One-Day Workshop on “Detection & Prevention of Adulteration in Food Stuffs”** organized by the School of Life Sciences, Post Graduate Department of Biochemistry, Ponnaiyah Ramajayam College, Thanjavur, held on 16th September 2002.

FDP/STTP Attended:

- ★ **NPTEL - AICTE Faculty Development Programme: Nanotechnology in Chemical Engineering(Jul-Oct 2025).**
- ★ **NPTEL - AICTE Faculty Development Programme: Polymers: Concepts, Properties, Uses and Sustainability(Jul-Oct 2025)**
- ★ **NPTEL - AICTE Faculty Development Programme: Wastewater Treatment and Recycling (Jul-Oct 2024).**
- ★ **NPTEL - AICTE Faculty Development Programme: Sustainable Engineering Concepts and Life Cycle Analysis (Jul-Sep 2024).**
- ★ **5-Day National Virtual FDP on Recent Advancement in Chemistry** organized by the Department of Chemistry, Easwari Engineering College, from 24th to 29th June 2024.
- ★ **5-Day FDP on Recent Trends in Additive Manufacturing** organized by the Department of Mechanical Engineering, Dr. M.G.R Educational and Research Institute, from 3rd to 7th June 2024.
- ★ **NPTEL - AICTE Faculty Development Programme: Applied Environmental Microbiology (Jan-Apr 2025).**
- ★ **NPTEL - AICTE Faculty Development Programme: Air Pollution and Control (Jan-Apr 2024).**
- ★ **NPTEL - AICTE Faculty Development Programme: Accreditation and Outcome-Based Learning (Aug-Oct 2023).**
- ★ **5-Day Face-to-Face UHV-II FDP** organized by All India Council for Technical Education (AICTE) at Sri Sairam Engineering College Autonomous, Chennai, from 26th July 2022 to 30th July 2022.
- ★ **5-Day Online FDP on “Inculcating Universal Human Values in Technical Education”** organized by AICTE, from 1st February 2021 to 5th February 2021.
- ★ **5-Day Online International FDP on “EDUCATION 4.0: The Future Ahead”** organized by the Internal Quality Assurance Cell with the Department of Science & Humanities, Sri Sairam College of Engineering, Bengaluru, from 10th to 14th August 2020.
- ★ **14-Day Online International FDP on “Materials Science & Nanotechnology”** organized by the Department of Chemistry, B.S. Abdur Rahman Crescent Institute of Technology, Chennai, from 3rd August 2020 to 16th August 2020.

- ★ **5-Day Online STTP on “Finite Element Method for Engineering Applications”** organized by the Department of Mechanical Engineering, Sri Sairam Engineering College, Chennai, from 3rd August 2020 to 8th August 2020.
- ★ **One-Day ISTE Sponsored FDP on “Working Culture for Professionals”** at Sri Sairam Engineering College, Chennai, on 11th November 2019.
- ★ **5-Day ISTE Sponsored FDP on “Renewable Energy Systems”** at Sri Sairam Engineering College, Chennai, from 22nd July 2019 to 26th July 2019.
- ★ **Two-Week ISTE STTP on “Environmental Studies”** conducted by IIT Bombay under the National Mission on Education through ICT (MHRD, Govt. of India), from 2nd June 2015 to 12th June 2015.
- ★ **One-Day Orientation Programme on “Coastal Biodiversity”** jointly organized by the Advanced Study in Marine Biology, Annamalai University, Parangipettai, and the Tamilnadu Science Forum (TNSF), held on 31st July 2004 as part of the Year of Scientific Awareness-2004 in Coastal Districts.

Symposium Attended:

- **Judge for Chemistry Paper & Poster Presentation** at the I Year Symposium, SIT-SCIHUM'19, held on 28th February 2019 at Sri Sairam Institute of Technology.
- **Two-Day Symposium on “Coordination Chemistry”** conducted by the Post-Graduate Department of Chemistry, National College, Tiruchirappalli, held on 16th and 17th February 1996.

Conference Attended:

1. **Presented a paper titled** "Bacterial inhibition investigation on Furfuryl amine derivatives" at the International Conference on Emerging Trends in Chemistry held at Raak Arts and Science College, Vilupuram. 3rd July 2025.
2. **Presented a paper titled** "Solutions for an Effective and Sustainable Faecal Sludge Management to Increase Productivity of Soil and Contribute to Doubling Farmers' Income" at the International Conference on Advances in Mechanical Engineering (ICAME 21) held virtually at Sri Sairam Engineering College on 27th & 28th January 2021.
3. **Presented a paper titled** "Kinetics and Mechanism of Oxidation of Aniline and Some p-Substituted Anilines by N-Bromo Phthalimide" at the National Level Seminar held at Valliammai Engineering College on 27th March 2017.
4. **Presented a paper titled** "Some Physico-Chemical Analysis of Soil and Water of Keezhathottam Mangrove, Tamil Nadu" at the Indian Science Congress Association held at S.V. University, Tirupati, from 3rd to 7th January 2017.
5. **Presented a paper titled** "Kinetics and Mechanism of Oxidation of Aniline and Some p-Substituted Anilines by N-Chlorosaccharin" at NCNRCR'2015, organized by the Department of Chemistry, SRM University, Ramapuram, Chennai, on 28th & 29th August 2015.
6. **Presented a paper titled** "Kinetics and Mechanism of Oxidation of Aromatic Amines by N-ChloroSaccharin" at the National Conference NCAFMA-2013, organized by Kalasalingam University on 23rd March 2013.
7. **Presented a paper titled** "Effect of Wedelia Calendulacea against Isoniazid-Induced Liver Toxicity in Albino Rats" at the National Conference organized by Sri Sai Ram Siddha Medical College & Research Centre, Chennai, held on 28th, 29th & 30th April 2010.

8. **National Conference on Modern Functional Materials (NCMFM-2023)** organized by FMRL Laboratory, Sairam Engineering College held from 23th -24th March 2023
9. **National Conference on Technology and Innovations in Healthcare (NCTIH 2022)** organized by Vinayaka Mission's Research Foundation, held from 4th to 5th November 2022.
10. **Two Days International Virtual Conference on Advanced Materials for Energy and Environmental Applications (ICAMEEA-2020)**, 3-4 December 2020, Department of Chemistry, Bharath Institute of Higher Education and Research, Chennai-600073, Tamil Nadu
11. **International Web-Conference on "Recent Trends in Scientific Research"** organized by the P.G. and Research Department of Chemistry, Dr. Ambedkar Government Arts College, held from 3rd to 4th August 2020.

Completed / Ongoing Projects:

- ❖ **Project entitled:** "Effect of ZnO Nanoparticles Added to Modified Carbohydrates and Proteins with *Senna Auriculata* Flower Mixture for Diabetes Control" submitted to the **Science & Engineering Research Board (SERB)** (Statutory Body Established Through an Act of Parliament: SERB Act 2008) under the **Scientific and Useful Profound Research Advancement (SUPRA)** program.
- ❖ **Project entitled:** "Salt-Based Edible Covering to Protect and Preserve Hay and Agricultural Byproducts" submitted to the **Department of Science & Technology (DST)** under the **Waste Management Technology (WMT) Program**.
- ❖ **Project entitled:** "Design, Synthesis, Characterization, and Applications of MOF-DABCO (1,4-diazabicyclo[2.2.2]octane)" submitted to the **Indian Nanoelectronics Users Program (INUP), IIT Bombay, Mumbai**.
- ❖ **Project entitled:** "Design and Fabrication of MOF-DABCO as a Gas Sensor" submitted to the **Department of Science and Technology (DST), Government of India, New Delhi**, under the **Electrochemical and Optical Imaging Device Technologies** program of the **Technology Systems Development Program (TSDP)**.

Patent: Published/Granted

1. **SYNTHESIS, CHARACTERIZATION, ANTIBIOTIC AND ANICANCER ACTIVITIES OF 1,3-BENZOTHIAZOL-2-AMINE CONDENSED AMIDE DERIVATIVES**
Application No.202541057908 A | The Patent Office Journal No. 27/2025 | Dated 04/07/2025 | Page No. 64088 (Published).
2. **SYNTHESIS OF BENZOTHIAZOLE AND HETEROCYCLIC ALDEHYDES CONDENSED SCHIFF BASES FOR AN ALTERNATE OF ANTIBIOTICS**
Application No.202541057938 A | The Patent Office Journal No. 27/2025 | Dated 04/07/2025 | Page No. 64090 (Published).
3. **SYNTHESIS AND ANTICANCER ACTIVITY OF THIOPHENE, PYRROLE AND QUINOLINE**

BASED SCHIFF BASES

Application No.202541057904 A | The Patent Office Journal No. 27/2025 | Dated 04/07/2025 | Page No. 64077 (Published).

4. BIOLOGICAL APPLICATIONS OF 1-(1-METHYL-3, 4, -TRI(PIPERIDIN-1-YL)-1H-PYRROL-2-YL) PIPERIDINE AND MORPHOLINE DERIVATIVES

Application No.202541057908 A | The Patent Office Journal No. 27/2025 | Dated 04/07/2025 | Page No. 64079 (Published).

5. Synthesis and Anticancer Activity of Novel Substituted Heterocyclic Carbazole Imines and Metal Complexes

Application No. 202441040957 A | The Patent Office Journal No. 22/2024 | Dated 31/05/2024 | Page No. 50217 (Published).

6. Synthesis and Anticancer Activity of Novel Substituted (3Z)-5-Bromo-3-{2Z}-[(2-Hydroxy-5-{(E)-[(PIPE) [Full Title Cut for Clarity]]

Application No. 202441040949 A | The Patent Office Journal No. 22/2024 | Dated 31/05/2024 | Page No. 50216 (Published).

7. Synthesis and Antimicrobial Activity of Novel Substituted N-(4-{1S)-3-Oxo-1-[(Pyridin-4-Yl) Amino]Bu [Full Title Cut for Clarity]

Application No. 202441040939 A | The Patent Office Journal No. 22/2024 | Dated 31/05/2024 | Page No. 50211 (Published).

8. Liquid Rechargeable Lithium-Ion Battery for Electric Vehicle Using Deep Learning Approach

Application No. 202341089553 A | The Patent Office Journal No. 02/2024 | Dated 12/01/2024 | Page No. 3670 (Published).

9. Synthesis, Characterization, Antidiabetic and Anticancer Activity of 2-[(Z)-({5-[5-Methyl-1,2-Oxazol-3-Yl) Amino]Pyridin-2-Yl}Imino) Methyl]Phenol Rare Metal (PR³⁺, Nd³⁺, Sm³⁺) Complexes

Application No. 202341026704 A | The Patent Office Journal No. 18/2023 | Dated 05/05/2023 | Page No. 34301 (Published).

10. Synthesis, Characterization, NLO, Antidiabetic, Anticancer, and Antibiotic Character of (E)-N,N'-(4-(((5-Chloropyridin-2-Yl)Imino)(Phenyl)Methyl)-1,2-Phenylene)Bis(6-Chloronicotinamide)

Application No. 202341026697 A | The Patent Office Journal No. 18/2023 | Dated 05/05/2023 | Page No. 34298 (Published).

11. Synthesis, Characterization and Anticancer Activity of N'-(2-Amino-1,3-Thiazole-4-Carbonyl)-6-Hydroxy

Application No. 202341026487 A | The Patent Office Journal No. 18/2023 | Dated 05/05/2023 | Page No. 34277 (Published).

12. Antibacterial, Anticancer, and Antidiabetic Activities of Various Acid Group Modified 5-Bromo-2-[(Z)-(6-Bromopyridin-2-Yl)Methylidene]Amino} Benzoic Acid Derivatives

Application No. 202241071817 A | The Patent Office Journal No. 52/2022 | Dated 30/12/2022 | Page No. 82668 (Published).

13. ZnO Nanoparticle Coated Cassia Auriculata Flower, Gum, Fenugreek, Aspartame Grinded Powder Mixed Chewable Tablet for Diabetic Control

Application No. 202241071813 A | The Patent Office Journal No. 52/2022 | Dated 30/12/2022 | Page No. 82667 (Published).

14. Synthesis, Characterization, Antimicrobial and Anticancer Activities of Pyrimidine, Pyridine Based Benzamide Derivatives

Application No. 202241071803 A | The Patent Office Journal No. 52/2022 | Dated 30/12/2022 | Page No. 82665 (Published).

15. **Water Purifying and Flavor Infusion Device**
Design No.: 347851-001 | Date of Issue: 08/12/2022 (Granted) | Published on: 09/12/2022.
16. **ZnO Nanoparticle Blended 5-Indanyl Methacrylate Homopolymer for Protective Coating Applications on Welded Surfaces**
Application No. 202241050750 A | The Patent Office Journal No. 37/2022 | Dated 16/09/2022 | Page No. 58326 (Published).
17. **A Mixture of Fish Amino Acid Produced from Waste Molasses, Pulverized Egg Shell, Zinc Oxide, and Silver Nanoparticles for Agricultural Field Fertility**
Application No. 202241050752 A | The Patent Office Journal No. 37/2022 | Dated 16/09/2022 | Page No. 58327 (Published).
18. **Synthesis, Characterization, Biological, NLO, and Corrosion Inhibition Applications of Novel Single Crystal 3-((2,4-Dioxothiazolidin-5-Yl) Methyl)-4-Methoxy-N-Phenylbenzamide**
Application No. 202241050754 A | The Patent Office Journal No. 37/2022 | Dated 16/09/2022 | Page No. 58328 (Published).
19. **Synthesis, Characterization, Anticancer, NLO and Corrosion Inhibition Applications of Novel Thiazol-4-Carbonyl-Thiazole-4-Carbohydrazide Derivatives**
Application No. 202241050755 A | The Patent Office Journal No. 37/2022 | Dated 16/09/2022 | Page No. 58329 (Published).
20. **Coir Pith, Waste Straw, Activated Carbon of Diplocyclos Palmatus**
Application No. 202241050757 A | The Patent Office Journal No. 37/2022 | Dated 16/09/2022 | Page No. 58330 (Published).
21. **An Optimized Bellow to Increase the Efficiency and Stability of the Pipe Joints**
Application No. 202141008189 A | The Patent Office Journal No. 10/2021 | Dated 05/03/2021 | Page No. 11222 (Published).
22. **Thermal Effect Powered Electric Motor to Minimize Power Consumption in Electric Vehicles**
Patent Granted on 14th April 2021 | The Commissioner of Patents, IP Australia (Granted).

Journal Publications:

1. **Ayyadurai G.K.**, Raman M.K., Selvaraju K., Somasundaram G., Emerson P One-pot preparation of ZnO-SnO₂@rGO nanocomposite using Bougainvillea glabra flower extract and evaluation of its photocatalytic removal of Coomassie Brilliant Blue *Journal of Organometallic Chemistry*, Vol. 1047 (2026) 124015
2. **G.K. Ayyadurai**, Gunasundari Kittappa, Paulson Emerson, Ganesh Kumar Rajendran, Sibi Srinivasan, Balu Mahendran Gunasekaran Ultrasonication accelerated covalently grafted piperazine on reduced graphene oxide via nucleophilic substitution reaction for electrochemical supercapacitor electrode material *Journal of Molecular Structure* Volume 1337, 15 August 2025, 142247
3. A. KISHORE BABU, K. SELVARAJU **G.K. AYYADURAI** and R. JAYAPRAKASH Synthesis, Characterization, Theoretical and Antimicrobial Studies of Substituted Isoxazoline Derivatives *Asian Journal of Chemistry* Vol. 37 No. 6 (2025): Vol 37 Issue 6, 2025 1294-1300.
4. K. Selvaraju, A. Kishore Babu, T. Maruthavanan, **G.K. Ayyadurai**, S. Sathiyamoorthi and Meganathan Chandrasekaran SPECTRAL, CONFORMATIONAL AND DOCKING STUDIES OF FURYL SUBSTITUTED HETEROCYCLIC COMPOUNDS *Rasayan J. Chem.*, 18(1), 438-443(2025)
5. Aravindhan, A; **Ayyadurai, G K**; Jayaprakash, R; Senthilnathan, G; Basha, I Ameeth Synthesis, Characterization and Coating Studies of Poly (5-Indanyl Methacrylate) - Methyl methacrylate Polymer on Pulsed Fiber Laser Arc

- Welded 316L Steel *International Journal of Vehicle Structures & Systems; Chennai* Vol. 17, Iss. 2, (2025): 345-349.
6. G. Senthilnathan, **G.K. Ayyadurai**, R. Jayaprakash, Balakrishnan Preethi, Revathi Purushothaman & Srinivasalu Kutti Rani
Anti-corrosive Efficacy of Indanyl Methacrylate Copolymers on Mild Steel in Salt Water and DFT Investigations, **Iranian Polymer Journal**, Nov 2024(Published online).
 7. Kumar Muthaiyan, Geetha Palani, Herri Trilaksana, M. Gurumoorthy, **G.K. Ayyadurai** & Arumugaprabu Veerasimman *Theoretical Investigation on Ferrite Immobilized Alginate Magnetic Nanocomposite Beads for the Adsorptive Removal of Prussian Blue*, **Analytical Chemistry Letters**, Nov 2024, 14(5).
 8. Arun Prabhu Subramanian, Rathakrishnan Samiyappan, Balakrishnan Anitha, **Gandhimathi Kaliyamoorthi Ayyadurai**, Jayaprakash Rajendran
Theoretical and Pharmacological Investigations of Phenylthiazol-2, 4-Dihydroxybenzaldehyde Condensed Schiff Base, **Biomedical and Pharmacology Journal**, Oct 2024, 17(4).
 9. **G.K. Ayyadurai**, S. Rathika S. Sumathi and R. Jayaprakash
Theoretical, Antibacterial, and Antioxidant Investigations of Hydroxyl Group Substituted Benzanilide Schiff Bases, **Asian Journal of Chemistry**, June 2024, 36(7), 1601-1608.
 10. T. Balamurugan, **G.K. Ayyadurai**, Herri Trilaksana, and Geetha Palani
Enhancing Mechanical Performance of Flax Fiber/Vinyl Ester Composites with Coconut Husk Char: A Sustainable Approach for Hybrid Composite Material, **Biomass Conversion and Biorefinery**, Vol. 15 (2025), pp. 7561-7570.
 11. R. Jayaprakash, **G.K. Ayyadurai**, S. Rathika, and A. Shajahan
Thickness-Based Degradation Study of Commercial Polyethylene Waste Carry Bags Using Galleria mellonella Worms, **Research Journal of Chemistry and Environment**, April 2024, 28(5), 100-105.
 12. **G.K. Ayyadurai**, R. Jayaprakash, A. Shajahan, and S. Rathika
Studies on 2-((2, 4-Dihydroxybenzylidene) Amino)-3-Phenylpropanoic Acid: Antimicrobial, Antidiabetic, Antioxidant, Anticancer, Hemolysis, and Theoretical QSAR, **Journal of Biomolecular Structure and Dynamics**, Dec 2023, 1-10.
 13. B. Preethi, K. Buvaneswari, **G.K. Ayyadurai**, S. Kutti Rani, and R. Jayaprakash
In Silico Docking Approach of Vitex negundo (Nochi Plant) Leaves Chemical Constituents Against Covid-19 Main Protease and 6LU7
Indian Journal of Natural Sciences, April 2022, 13(71), 39662-39668.
 14. Natesan Vijayakumar, Venkataesan Kumari Bhuvaneshwari, **Gandhimathi Kaliyamoorthi Ayyadurai**, Rajendran Jayaprakash, Kasi Gopinath, Marcello Nicoletti, Saud Alarifi, Marimuthu Govindarajan
Green Synthesis of Zinc Oxide Nanoparticles Using Anoectochilus elatus and Their Biomedical Applications, **Saudi Journal of Biological Sciences**, April 2022, 29(4), 2270–2279.
 15. **G.K. Ayyadurai**, R. Jayaprakash, S. Rathika
Theoretical Molecular Properties Prediction, Docking, and Antimicrobial Studies on Anisidine-Isatin Schiff Bases, **Asian Journal of Chemistry**, December 2021, 33(12), 3025-3030.
 16. **Dr. G.K. Ayyadurai**, Dr. R. Jayaprakash
Theoretical Studies on COVID-19-3JCL Spike Protein and Docking Study with Azadirachta Indica Nimbin and Nimbolide, **International Journal For Innovative Research in Multidisciplinary Field**, April 2021, 7(4), 24-29.
 17. V. Ramamurthy, H.V. Anilkumar, and **G.K. Ayyadurai**
Bioefficacy of Vitex Negundo Extract Profile on the Ovipositional Behavior of Euprotre Mollifera, **Journal of Interdisciplinary Cycle Research**, September 2019, 11(9), 660-665.

18. S. Senthil Kumar, **G.K. Ayyadurai**, V. Ramamurthy, and S. Raveendran
Comparative Studies on Various Physico-Chemical Parameters of Different Industrial Wastewater,
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23. **G.K. Ayyadurai**, N.M.I. Alhaji, and A. Shajahan
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Books / Book Chapters:

❖ Environmental Science and Engineering

Author: **Dr. G.K. Ayyadurai**

First Edition: January 2022; Second Revised & Enlarged Edition: February 2023

ISBN: 978-93-95254-78-6

❖ Engineering Chemistry

Author: **Dr. G.K. Ayyadurai**

First Edition: December 2021; Second Edition: September 2022

ISBN: 978-93-95254-79-3

Awards:

★ Association of Pharmaceutical Teachers of India

- Contributed to enhancing intercommunication and promoting excellence in pharmacy education.

★ **Certification of Appreciation**

- Awarded for motivating mentee **Sahana A** (I Year EEE), who achieved a remarkable score of 2187, becoming the Topper in Skill Rack during the academic year 2021-2022.

★ **HUMCEN Award**

- Certificate of Recognition for the valuable contribution to the work titled “**Thermal Effect Powered Electric Motor to Minimize Power Consumption in Electric Vehicles**”, associated with Australian Patent Application Number: 2021100914.

Startup:

- ★ **MSME Startup Founder:** Founder of **Sai Organic Pro Plus** (UDYAM Registration No. UDYAM-TN-08-0017217), registered under the Sri Sairam Techno Incubator Foundation, Sri Sairam Engineering College, Chennai-44.



Type of Enterprise	MICRO	Major Activity	Manufacturing
Type of Organisation	Proprietary	Name of Enterprise	Sai Organic Pro Plus
Owner Name	SHRI AYYADURAI	PAN	AMEPA4038J
ITR for Previous Year	No	ITR Type	NA
Do you have GSTIN	NA	Mobile No.	9176145354
Email Id	ayyaduraisairam@gmail.com	Social Category	OBC
Gender	Male	Specially Abled(DIVYANG)	No
Date of Incorporation	07/05/2020	Date of Commencement of Production/Business	

NATIONAL INDUSTRY CLASSIFICATION CODE(S)	SNo.	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit	Activity
	1	20 - Manufacture of chemicals and chemical products	2023 - Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	20239 - Manufacture of other perfumes and toilet preparations n.e.c.	Manufactur
DATE OF UDYAM REGISTRATION	24/03/2021				

Webinar:

- ❖ **Webinar on "one day Awareness Meet on Materials Science with Ion Accelerator"**
Organized by UGC-DAE CSR Kalpakkam Node through online mode on July 19, 2022.
- ❖ **Webinar on "NAAC Accreditation Management System DEM"**
Organized by InPods Ed-tech, held on 27/05/2020.
- ❖ **Webinar on "Waste Management Strategies"**
Organized by the Department of Science and Humanities, Hindustan College of Engineering and Technology, Coimbatore, held on 31/05/2020.

❖ **Webinar on "R&D Proposal Writing for Facilities"**

Organized by Sri Sairam Engineering College, Chennai-44, held on 12/06/2020.

❖ **Webinar on "Future of Higher Education - Nine Mega Trends"**

Organized by ICT Academy, held on 30/06/2020.

❖ **Webinar on "India's First Leadership Talk Series"**

Organized by MHRD's Innovation Cell, held on 13/05/2020.

Resource Person:

❖ **Invited Talk on "Nanotechnology and Its Impacts on Your Future"**

Conducted by the IEEE Nanotechnology Council, Sri Sairam Engineering College, held on 25/05/2022.

❖ **Delivered an Invited Talk on "Plastic Waste Management"**

For NCC Students, organized by the Department of Chemistry, Sri Sairam Engineering College, held on 13th December 2019.

❖ **Acted as a Judge for Chemistry Paper & Poster Presentation**

I Year Symposium, SIT-SCIHUM'19, on 28th February 2019, at Sri Sairam Institute of Technology.

❖ **Delivered an Invited Talk on "Ideal Sustainable Development – Eco-Friendly Houses"**

At the International Seminar on New Frontiers and Challenges in Environmental Sciences (BIOENVIRON-16), organized by the School of Biosciences, Marudupandiyar College, Thanjavur, held on 11th & 12th February 2016.

Online Courses:

1. **Successfully completed a 12-week course on Polymers: Concepts, Properties, Uses and Sustainability – NPTEL Certificate, Online Course (July-Oct 2025).**
2. **Successfully completed a 8-week course on Nanotechnology in Chemical Engineering – NPTEL Certificate, Online Course (Aug-Oct 2025).**
3. **Successfully completed a 12-week course on Applied Environmental Microbiology – NPTEL Certificate, Online Course (Jan-Apr 2025).**
4. **Successfully completed a 8-week course on Building Energy systems and Auditing – NPTEL Certificate, Online Course (Feb-Apr 2025). Successfully completed a 12-week course on Environmental Science – NPTEL Certificate, Online Course (July-Sept 2024).**
5. **Successfully completed a 12-week course on Wastewater Treatment and Recycling – NPTEL Certificate, Online Course (July-Sept 2024).**
6. **Successfully completed an 8-week course on Sustainable Engineering Concepts and Life Cycle Analysis – NPTEL Certificate, Online Course (July-Sept 2024).**
7. **Successfully completed a 12-week course on Air Pollution and Control – NPTEL Certificate, Online Course (Jan-Apr 2024).**
8. **Successfully completed an 8-week course on Accreditation and Outcome-Based Learning – NPTEL Certificate, Online Course (Aug-Oct 2023).**
9. **Successfully completed a 3-month certification course on Panchayat Raj and Rural Development – Conducted by State Institute of Rural Development & Panchayat Raj (Nov 2023).**
10. **Successfully completed Module-8: Institutional Management and Administrative Procedures – National Initiative for Technical Teachers Training (NITTT), February 2023.**
11. **Successfully completed Module-7: Creative Problem Solving, Innovation, and Meaningful R&D –**

National Initiative for Technical Teachers Training (NITTT), February 2022.

12. **Successfully completed Module-6: Student Assessment and Evaluation** – National Initiative for Technical Teachers Training (NITTT), July 2022.
13. **Successfully completed Module-5: Technology Enabled Learning and Life-Long Self-Learning** – National Initiative for Technical Teachers Training (NITTT), February 2023.
14. **Successfully completed Module-4: Instructional Planning and Delivery** – National Initiative for Technical Teachers Training (NITTT), February 2023.
15. **Successfully completed Module-3: Communication Skills, Modes, and Knowledge Dissemination** – National Initiative for Technical Teachers Training (NITTT).
16. **Successfully completed Module-2: Professional Ethics and Sustainability** – National Initiative for Technical Teachers Training (NITTT), February 2023.
17. **Successfully completed Module-1: Orientation towards Technical Education and Curriculum Aspects** – National Initiative for Technical Teachers Training (NITTT), July 2022.
18. **Successfully completed 20.5 hours of the course "Complete General Chemistry"** – Udemy Online Course, April 14, 2020.
19. **Successfully completed "The Sustainable Development Goals – A Global, Transdisciplinary Vision for the Future"** – Authorized by the University of Copenhagen, offered through Coursera on May 12, 2020.
20. **Successfully completed "Advanced Chemistry"** – Authorized by the University of Kentucky, offered through Coursera on May 14, 2020.
21. **Successfully completed "Municipal Solid Waste Management in Developing Countries"** – Authorized by EPFL, offered through Coursera on May 19, 2020.
22. **Successfully completed "AI for Everyone"** – Authorized by deeplearning.ai, offered through Coursera on May 16, 2020.
23. **Successfully completed "Natural Gas"** – Authorized by the University at Buffalo and University of New York, offered through Coursera on May 23, 2020.
24. **Successfully completed "Quantum Mechanics"** – Authorized by the University of Colorado Boulder, offered through Coursera on May 23, 2020.
25. **Successfully completed "Introduction to Molecular Spectroscopy"** – Authorized by the University of Manchester, offered through Coursera on May 24, 2020.
26. **Successfully completed "Safety in the Utility Industry"** – Authorized by the University at Buffalo and University of New York, offered through Coursera on May 31, 2020.
27. **Successfully completed "Disaster Preparedness"** – Authorized by the University of Pittsburgh, offered through Coursera on June 10, 2020.
28. **Successfully completed "General Chemistry: Concept Development and Application"** – Authorized by the University of Pittsburgh, offered through Coursera on July 2, 2020.
29. **Successfully completed "Mastering Bitumen for Better Roads and Innovative Applications"** – Authorized by the University of Pittsburgh, offered through Coursera on July 2, 2020.
30. **Successfully completed 11 hours of the course "The Collection of 3D Digital Content for Chemistry – Part 2"** – Udemy Online Course, November 7, 2019.