Faculty Profile

Name : N.Banumathi

Designation : Assistant Professor

Address : Assistant Professor of Chemistry , Chikkanna Govt Arts College , Tirupur.

Contact Number : 9944452262

Email ID : mobapra33@yahoo.co.in

Date of Joining in Collegiate Education : 29.07.2015

Date of Joining in the Present College : 03.12.2024

Academic Profile :

Degree	Specialization	College	University	Year
B.Sc	Chemistry	CBM College	Bharathiar University	1995
B.Ed	Gen. English / Physical Science	Avinashilingam	Avinashilingam University	1998
M.Sc	Chemistry	CBM College	Bharathiar University	1998
M.Phil	Chemistry (Corrosion Science)	CBM College	Bharathiar University	2008
Ph.D	Chemistry (Corrosion Science)	Avinashilingam	Avinashilingam University	2012

Teaching Experience

i) **Total** : 24 Years 8 Months
ii) **UG** : 23 Years 8 Months
iii) **PG** : 9 Years 7 Months

Name of the college	Position held	Period
Park College of Engineering and Technology - Coimbatore	Assistant Professor	2000 -2009
SriGuru Institute of Technology - Coimbatore	Assistant Professor	2000 - 2015
Kundavai Nachiar Govt Arts college for Women - Tanjavore	Assistant Professor	2015
Rani Anna Govt College for Women - Tirunelveli	Assistant Professor	2015 - 2024
Chikkanna Govt Arts College - Tiruppur	Assistant Professor	2029 – till now

Membership of Academic Bodies

- Member of Board of Studies in Mother Therasa University from 2022 to 2025
- Served as Chief Examiner for Central Evaluation of Anna University Examinations at Government College of Technology (GCT), Coimbatore.

Field of Interest :

i) **Teaching** : Chemistry
ii) **Research** : Chemistry related Research
iii) **Proficiency in instrumentation** :

Research Guidance
Guidance Number :

S.No	Name of the Student	Thesis Title	Year
19	A. Jose Bernick	Biosorption of Methylene Blue Dye using Natural Biosorbent made from Leaves of Thespesia populnea	2021-2022
18	A. Sudha	Biosorption of Methyl Orange Dye using Natural Biosorbent made from Leaves of Bauhinia purpurea	2021-2022
17	Jose Bernick	Biosorption of Methylene Blue Dye using Natural Biosorbent made from Leaves of Thespesia populnea	2021-2022
16	A. Meenakshi	Biosorption of Methylene Blue Dye using Natural Biosorbent made from Leaves of Cassia siamea	2021-2022
15	R. Mahila	Adsorption of Methylene Blue Dye using Activated Carbon	2021-2022
14	A. Therowpathi	Biosorption of Methyl Orange Dye using Natural Biosorbent made from Leaves of Cassia siamea	2020-2021
13	T. Mariammal	Biosorption of Methyl Orange Dye using Natural Biosorbent made from Leaves of Bauhinia purpurea	2020-2021
12	R. Anusia	Biosorption of Methyl Orange Dye using Natural Biosorbent made from Leaves of Thespesia populnea	2020-2021
11	Sundari S.	Corrosion mitigation effect of Tegretol Tablet on mild steel in acid medium	2019-2020
10	Punitha S.	Corrosion mitigation effect of Natrilix Tablet on mild steel in acid medium	2019-2020
9	Esakkithangam M.	Corrosion mitigation effect of Demisone Tablet on mild steel in acid medium	2019-2020

8	V. Vanitha	Inhibition effect of Astonia scholarisis leaf extract on mild steel in neutral medium	2018-2019
7	M. Sudha	Corrosion mitigation effect of Gaazuma ulmifolia leaf extract on mild steel in neutral medium	2018-2019
6	R. Janani	Corrosion inhibition of mild steel using Gossypium arboretum leaf extract in bore water medium	2018-2019
5	N. Karpagavalli	Corrosion control of mild steel in neutral medium by Cassia siamea green inhibitor	2018-2019
4	Sugirtha	Removal of Methylene Blue from effluent by Graphene oxide	2017-2018
3	T. Kaliammal	Removal of Rhodamine B from effluent by Graphene oxide	2017-2018
2	M. Kavitha	Removal of Malachite Green from effluent by Graphene oxide	2017-2018
1	N. Mallika, M. Priya, E. Rajeswaripriya, S. Ramalakshmi	Rapid crystallization and proton conductivity of Zn(II) and Cu(II) Anthranilic acid complex	2016-2017

No	Name of the student	Thesis Topic (PhD)	Year
5	P.Yogalakshmi	Co-ordination Chemistry Transition metal complexes synthesis and Charectarization	Ongoing
4	K.Gurusamy	Adsorption Kinetics and Isotherm studies for the removal of metal ions using low cost adsorbents from Agricultural waste	Ongoing
3	A.Suman	Synthesis And Characterization Of Versatile Nanomaterials Towards The Removal Of Industrially Important Hazardous Pollutants	Ongoing
2	D.Jeevarathinam	Experimental and theoretical Studiesfor the removal of dyes from aqeous solutions byadsorptionusing low cost adsorbents	2024
1	R.Rajeswaran	Adsorption Studies on removal of some Important dyes from aqueous solution using activated carbons obtained from low cost materials	2023

Publications:

i) Book/Book Chapters :

1. Banumathi, M., Nataraj, V., & Radhidevi, K. Engineering Chemistry I Theory & Practical Books. Inder Publications. (2006–2009). ISBN: N/A.
2. Banumathi, M. Engineering Chemistry I Theory & Practical Books. Inder Publications. (2008). ISBN: 13-978-81-907657-5-6.
3. Yamuna, R. T., & Banumathi, M. Environmental Science and Engineering. Inder Publications. (2008). ISBN: N/A.
4. Banumathi, M., Rajeswari, K., & Jeba Ramya, J. Engineering Chemistry II Theory. Inder Publications. (2009). ISBN: 13-97881907657-6-3.

5. Banumathi, M., Pradeeba, S. J., Kasthuri, N., Sathyapriya, D., & Geethamani, P. Engineering Chemistry II Theory. Inder Publications. (2012–2014). ISBN: 978-93-80757-04-9.
6. Arulanantham, A., Banumathi, M., Pradeeba, S. J., Kasthuri, N., Sathyapriya, D., & Geethamani, P. Engineering Chemistry I Theory. Maruthi Publications. (2012). ISBN: 978-93-80757-06-3.
7. Banumathi, M., Pradeeba, S. J., Kasthuri, N., Sathyapriya, D., & Geethamani, P. Environmental Science and Engineering. Maruthi Publications. (2012). ISBN: 978-93-80757-04-9.

National and International Conferences : See Annexure – II

Conference/Seminar Organised :

Banumathi, N. (Member). Symposium on Recent Trends in Physical Science (National Level). Self-supported. 18–19 March 2019.

Faculty Programs attended:

S.No	Name of Programme	Level	Sponsoring Agency	Date	Venue
1	Faculty Development Programme	National	SHRDA	29th June to 5th July 2001	Park College of Engineering and Technology, Kaniyur
2	Recent Trends in Atmospheric Sciences – Training Programme	National	AICTE	16th to 22nd August 2008	Indian Institute of Technology Madras, Chennai
3	One Day Orientation Programme for Govt Aided and Autonomous College Teachers	State	UGC	15th September 2017	Manonmaniam Sundaranar University, Tirunelveli
4	Orientation Course	State	HRDC	17th Nov to 14th Dec 2017	Bharathiar University, Coimbatore

5	Refresher Course	State	HRDC	20th June to 3rd July 2019	Bharathiar University, Coimbatore
6	Online Refresher Course in Chemistry for Higher Education	National	SWAYAM ARPIT	Exam on 26th February 2020	Sri Guru Tegh Bahadur Khalsa College, University of Delhi
7	Online FDP Webinar on Development of Higher Education in India – An Overview	National	GADTLC-MHRD-PMMMNMTT	16th April 2020	Sri Guru Tegh Bahadur Khalsa College, University of Delhi
8	Online FDP in Design, Develop and Deliver through Moodle Platform	State	TANSCHE	15th to 16th May 2020	Tamil Nadu Government
9	Virtual FDP on Advanced Topics in Chemical Sciences	International	PG Department of Chemistry	15th to 21st May 2020	Nallamuthu Gounder Mahalingam College, Pollachi
10	Online FDP on Multimedia Enriched e-Content Development	National	GADTLC-MHRD-PMMMNMTT	21st to 26th May 2020	Sri Guru Tegh Bahadur Khalsa College, University of Delhi
11	Online FDP on Funding Schemes and Patenting Scientific Innovations	National	IQAC and PG Department of Chemistry	13th June 2020	Government Arts College, Trichy
12	FDW on Challenges and Opportunities in Interdisciplinary Science Research	National	PG Department of Chemistry	17th to 19th June 2020	The Standard Fireworks Rajarathinam College for Women, Sivakasi

13	Workshop on E-Content for Effective Teaching	National	IQAC, RAGCW	13th to 17th July 2021	Rani Anna Government College for Women, Tirunelveli
14	Refresher Course	State	HRDC	5th to 18th July 2023	Bharathiar University, Coimbatore
15	FDP by Naan Mudhalvan	State	—	—	Manonmaniam Sundaranar University

Annexure - I

Research Papers:

1. **Banumathi, N**., Subhashini, S., & Rajalakshmi, R. (2010). Polyethylene Glycol - Anthranilic acid composite as corrosion inhibitor on mild steel in acid medium. *E-Journal of Chemistry*, 7(S1), S67–S72. ISSN: 0973-4945. https://doi.org/10.1155/2010/630592
2. **Banumathi, N**., Subhashini, S., & Rajalakshmi, R. (2010). Polyethylene Glycol - Aniline composite as corrosion inhibitor on mild steel in acid medium. *Journal of Ultra Chemistry*, 6(2), 129–136.
3. **Banumathi, N**., & Kasthuri, N. (2012). Corrosion inhibition of Cefuroxime Axetil on mild steel with acid solution. *Oriental Journal of Chemistry*, 28(1), 499–505. ISSN: 0970-020.
4. **Banumathi, N**., & Subhashini, S. (2016). Corrosion mitigation effect of water soluble poly (ethylene glycol–ethoxy aniline) composite on mild steel in acidic medium. *Chemical Science Review and Letters*, 5(18), 174–182. ISSN: 2278-6783.

5. **Banumathi, N**., & Kasthuri, N. (2016). Corrosion inhibition of mild steel in sulphuric acid by *Ricinus communis* leaves. *International Journal of Research in Pharmacy and Chemistry (IJRPC)*, 6(4), 826–832. ISSN: 2231-2781.
6. **Banumathi, N**. (2017). Corrosion inhibition of 7-ADCA on mild steel with acid solution. *RAC Journal of Research*, 14(1), 169–175. ISSN: 2230-7362.
7. **Banumathi, N**. (2017). Electrochemical inhibition studies of Cefuroxime Axetil and 7-ADCA on mild steel with acid solution. *RAC Journal of Research*, 15(2), 1–15. ISSN: 2230-7362.
8. **Banumathi, N**., Kavitha, M., Kaliammal, M., & Sugirtha, S. (2018). Removal of methylene blue dye using activated charcoal. *RAC Journal of Research*, 16(1), 19–25. ISSN: 2230-7362.
9. **Banumathi, N**., Subhashini, S., & Rameshkumar, S. (2018). Poly(ethylene glycol-methoxy aniline) composite as corrosion inhibitor for mild steel in acidic medium. *International Journal of Multidisciplinary Research*, 3, 33–37. ISSN: 2278-2311.
10. **Banumathi, N**., & Rameshkumar, S. (2019). Rapid crystallization and proton conductivity of copper (II) cinnamic acid complex. *Advances in Materials Chemistry and Physics*, 152–157. ISBN: 978-93-5391-894-1.
11. Bhaskar, T., & **Banumathi, N.** (2019). Experimental and theoretical comparative studies of 2-nitro-2-phenoxalate propane-1,3 diol. *Journal of Emerging Technologies and Innovative Research*, 6(4), 688–695. ISSN: 2349-5162.
12. Bhaskar, T., Mythili, C.V., & **Banumathi, N**. (2021). Synthesis of 2-Amino-2'-Bromo-Propane-1,3-Diol. *Natural Volatiles & Essential Oils*, 8(4), 4980–4984. (Scopus Indexed, Serial No: 29414). ISSN: 2148-9637.
13. Bhaskar, T., Shanmugasundari, M., Vijaya, P., & **Banumathi, N**. (2022). Synthesis, characterization and DFT study of 2-(2-amino-1,3-dihydroxypropane-2-ylamino) benzoic acid. *Research Journal of Chemistry and Environment*, 26(12), 146–153.
14. Bhaskar, T., Gana Saraswathy, D., Vijaya, P., & **Banumathi, N**. (2023). Synthesis, characterization and DFT study of 2-amino-2'-(diphenylamino)-

propane-1,3-diol. *Research Journal of Chemistry and Environment*, 27(6), 74–79. https://doi.org/10.25303/2706rjce074079

15. Rajeswaran, R., Archana, S., Murugan, T., Shylasree, G.V., **Banumathi, N**., & Muthirulan, P. (2022). Agriculture byproducts derived indigenously prepared activated carbons to remove Safranin (SF) dyes from aqueous solution: A comparative study. *Research Journal of Agricultural Sciences*, 13(1), 103–107. ISSN: P-0976-1675, E-2249-4538.
16. Rajeswaran, R., **Banumathi, N**., & Muthirulan, P. (2023). Biomass-derived activated porous carbon from *Manilkara kauki* L. bark as a potential adsorbent for the removal of Congo red dye from aqueous solution. *Biomass Conversion and Biorefinery*. https://doi.org/10.1007/s1399-023-03969-5
17. Rajeswaran, R., Shanmugam, A.S., **Banumathi, N**., & Muthirulan, P. (2023). Agriculture byproduct-derived versatile *Cassia fistula* seed shell carbon for the removal of Acid Violet 17 dye from aqueous solution: Adsorption kinetics, equilibrium and mechanism studies. *Biomass Conversion and Biorefinery*. https://doi.org/10.1007/s1399-023-04148-2
18. Jeevarathinam, D., **Banumathi, N**., & Muthirulan, P. (2023). Activated carbons from biomass based Garcinia mangostane and Datura stramonium fruit peel for the removal of Alizarin Cyanine Green dye: Adsorption isotherm and kinetic study. Research Journal of Agricultural Sciences, 14(1), 272–276. P-ISSN: 0976-1675 | E-ISSN: 2249-4538.
19. Jeevarathinam, D., Muthirulan, P., & **Banumathi, N**. (2023). Adsorption isotherm and kinetic study of the removal of cresol red dye using indigenously prepared activated carbons from Artocarpus hirsutus and Annona muricata fruit peel. Goya Journal, 16(12), 27–37. https://doi.org/10.163022.Gj.2023.v16.12.005
20. Jeevarathinam, D., Muthirulan, P., & **Banumathi, N**. (2023). Removal of toxic methylene blue dye from aqueous solutions using porous activated carbons from Artocarpus hirsutus fruit peel by adsorption: Kinetic and equilibrium study. Indian Journal of Natural Sciences, 14(81). (Page numbers not available)

21. Yogalakshmi, P., & **Banumathi, N**. (2023). Synthesis, spectroscopic, computational structure analysis, molecular docking, in-vitro antibacterial and in-vivo antipyretic investigations of transition metal (II) complexes. Asian Journal of Chemistry, 35(12), 2888–2898. https://doi.org/10.14233/ajchem.2023.28054

22. Shanmugasundari, M., Vijaya, P., Bhaskar, T., & **Banumathi, N**. (2024). Prolific, characterized and hypothetical evaluation of guanine derivative 2-amino-9-(4-isopropylbenzyl)-1,9-dihydropurin-6-one design and development of humanoid arm for physically disabled people. Journal of Dynamics and Control, 8(8), 388–399.

23. Yogalakshmi, P. & **Banumathi N**. (2025). Synthesis, Characterisation, Biological Evaluation, and Computational Studies of a Novel Tetraaza Amide Macrocyclic Ligand and Its Metal Complexes Targeting Glioblastoma and HDAC II Inhibition. The Bioscan, 20(Supplement 2), 565–575. https://doi.org/10.63001/tbs.2025.v20.i02.S2.pp565-575

24. P. Yogalakshmi, & Dr. N. Banumathi. (2025). Synthesis, Characterization, Computational Analysis, and Biological Evaluation of a Novel Tetraaza Macrocyclic Amide Ligand and its Metal Complexes as Potential HDAC-I Inhibitors and Anticancer Agents against Skin Melanoma. The Bioscan, 20(Supplement 2), 156–170. https://doi.org/10.63001/tbs.2025.v20.i02.S2.pp156-170

Annexure - II

National and International Seminars and conferences:

Participated:

1. Strategic Management of Environmental Pollution, a National level conference sponsored by AICTE, held on 3rd March 2006 at Dr. Mahalingam College of Engineering and Technology, Pollachi.
2. Current Developments in Chemistry, a National level conference sponsored by UGC, held on 18th and 19th January 2007 at Bharathiar University, Coimbatore.

3. Recent Trends in Chemistry - 2007, a State level conference sponsored by UGC, held on 26th and 27th March 2007 at Avinashilingam University for Women, Coimbatore.
4. Research in Chemistry Visualising Newer Concepts (RC-VNC-2007), an International level conference sponsored by UGC, held on 12th December 2007 at Avinashilingam University for Women, Coimbatore.
5. Recent Trends in Polymer Science and Technology, a National level conference sponsored by UGC, held on 15th and 16th November 2008 at PSG College of Technology, Coimbatore.
6. Workshop on Pathfinder - Explore, Experiment, Elucidate Research: A Colloquium-2010, a State level event sponsored by UGC, held on 22nd and 23rd December 2010 at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
7. Research Convention "Research Ethics and Post Research Perspectives", a National level event sponsored by UGC, held on 10th and 11th August 2011 at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
8. Recent Trends in Medicinal Chemistry, a National level conference sponsored by UGC, held on 19th and 20th February 2015 at Govt Arts College, Coimbatore.
9. Workshop on Recent Advances in Chemistry Lecture (RAC – 2016), a National level event sponsored by AICTE, held on 26th and 27th February 2016 at V.O. Chidambaram College, Thoothukudi.
10. Health and Hygiene, an International event organized by the Rotaract Club, held on 8th August 2016 at Rotaract Club of Rani Anna Govt. College for Women, Tirunelveli.

Paper Presented/Published in National and International Conferences:

1. A paper titled **"Corrosion Mitigation effect of Water soluble Poly (Ethylene Glycol – orthoToludine) Composite on mild steel in acidic medium"** was delivered at the **Corrosion, Surface Engineering & Tribology (CST-2013)**

conference, a National level event sponsored by NCCI and CECRI, held on 22nd and 23rd April 2013 at the National Institute of Technology, Tiruchy.

2. A paper titled **"Corrosion Mitigation effect of Water soluble Poly (Ethylene Glycol – ethoxy Aniline) Composite on mild steel in acidic medium"** was delivered at the **Fundamental and Applied Chemistry** conference, an International level event organized by Chemical Science Review and Letters, Salem on 4th June 2016.

3. A poster titled **"Rapid crystallization and proton conductivity of Zn (II) Anthranilic acid complex"** was shown at the **Emerging Trends in Multi Disciplinary Seminar**, a National level event sponsored by UGC, held on 10th January 2017 at Rani Anna Government College for Women, Tirunelveli.

4. A paper titled **"Poly(Ethylene glycol-methoxy aniline) composite as corrosion inhibitor for mild steel in acidic medium"** was delivered at the **4th International Seminar of SVASH 2018**, an International level event sponsored by UGC, held on 22nd December 2018 at Swami Vivekananda Association of Science and Humanities.