

Dr. S. VIDHYA

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Professional Summary

I am a disciple of Swami Vivekananda from my childhood. I am inspired from the quote “**Educate and raise the masses, and thus alone a nation is possible**” and I have a strong desire to become an educator to build my nation by nurturing the young minds.

Qualification **M.Sc., M.Phil., B.Ed., Ph.D.**

Experience

- From May 2008 to April 2009 worked as a PGT in New Prince Matriculation Higher Secondary School, Adampakkam, Chennai
- From May 2009 to May 2013 worked as an Assistant Professor, Department of Chemistry, Pavendar Bharathidasan Institute of Information Technology, Tiruchirappalli
- From August 2013 to January 2014 (Leave Post) and February 2014 to till date working as an Assistant Professor, PG & Research Department of Chemistry, Holy Cross College (Autonomous), Tiruchirappalli - 620 002.

Total years of service for UG - **14 Years 9 months**

PG - **10 Years 9 months**

M.Phil.- **9 Years 10 months**

Education

- 2004- B.Sc., Chemistry- Rajah Serfoji Government College, Thanjavur
- 2006- M.Sc., Chemistry- Rajah Serfoji Government College, Thanjavur
- 2007- M.Phil., Chemistry- A.V.V.M. Sri Pushpam College, Poondi.
- 2008- B.Ed., - STET College of Education for Women, Mannargudi.
- 2017- Ph.D., - Holy Cross College (Autonomous), Tiruchirappalli.

Core Competencies

- Efficiency in teaching chemistry with ICT mode.
- Capable of designing lesson plans and E-contents to meet student’s need and their requisites.

- Able to integrate the scientific knowledge with their applications through projects.
- Able to handle the sophisticated instruments like FT-IR Spectroscopy, UV-Visible spectroscopy, Electrochemical workstation, AAS, HPLC etc.
- Rectified the laboratory instruments faults by own experience.
- High level of creativity, flexibility and adaptability.
- Good mentor and counselor.
- Developed 5 E-content.

Leadership Profile

- Serving as Citizen Consumer Club coordinator from June 2022 onwards.
- Serving as a NAAC Curriculum committee core member from June 2022 to May 2023 and NAAC Innovation and Best Practices core committee member from June 2023 onwards.
- Served as an Association Vice President from June 2017 to April 2018 and June 2020 to April 2021.
- Served as an M.Phil., Coordinator from June 2017 to April 2018.
- Served as a Prize Distribution Committee Member in 93rd and 94th College Day 2017.
- Served as a Cleanliness Core Committee Member from 2016 to 2017.
- Served as PG coordinator 2015 to 2017.
- Served as Department Discipline Committee Member from 2016 to 2017
- Resource person in Workshop on Safety and Handling of Chemicals in Chemistry Laboratory at HCC, Trichy.

Key Achievements

- Successfully completed Two Weeks Refresher course on Forensic Chemistry and Forensic Science jointly organized by **Guru Angad Dev Teaching Learning Centre** SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of **MHRD** in collaboration with University of Delhi (Department of Anthropology and Skills Enhancement committee) Acharya Narendra Dev College, DU (Department of Biomedical Science) and Forensic Science Unit, SGTB Khalsa College, University of Delhi in the topic “SKILL DEVELOPMENT IN FORENSIC SCIENCE & FORENSIC CHEMISTRY” on 6th April to 30th April 2024.
- Successfully completed **One-Week Online National Faculty Development Program** jointly organized by **Guru Angad Dev Teaching Learning Centre** SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of **MHRD** in the topic “MOOCS AND E-CONTENT DEVELOPMENT” on 25th May to 31st May 2023.

- Successfully completed **UGC- SPONSORED TWELFTH ONLINE FACULTY INDUCTION PROGRAMME** conducted by UGC HRDC, BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI from 28.10.2022 to 26.11.2022.
- Successfully completed **One Week Faculty Development Program** jointly organized by **Guru Angad Dev Teaching Learning Centre** SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of **MHRD** in the topic “Multimedia enriched e- Content Development” on 21st-26th May 2020.
- **Young Achiever award 2021** from Institute of Researchers in recognition of outstanding Professional & Research achievements in the field of Chemistry, 20th September 2021.
- **Best Young Scientist award** from Bose Science Society in the 9th NACON 2019, 24th August 2019.
- Degree of Doctor of Philosophy has been approved by the Board of Examiners as **HIGHLY COMMENDED** in Chemistry.
- **Best Paper award** for the paper in National Conference on Evolutionary Trends in Biological and Pharmaceutical Chemistry, Holy Cross College (Autonomous), Tiruchirappalli - 620002, 30th & 31st January 2014
- **Best Paper award** for the paper in International Conference on Chemistry of Biomolecules – Current Trends and Future Perspectives, Holy Cross College (Autonomous), Tiruchirappalli - 620002, 27th & 28st July 2016
- Obtained the Prize for **Proficiency** in all the 3 years of my Under Graduate
- Good Academic Record at the School level

MEMBERS IN VARIOUS BODIES:

- Life Member of Bose Science Society.(M592/BSS/2019)
- Fellowship of Bose Science Society. (F592/BSS/2019)
- Life Member in Institute of Researchers. (LM042103)
- Reviewer in Oriental Journal of Chemistry

Research Experience

Field: Corrosion and Nanoscience

- At present guiding 02 Ph.D. scholars.
- Guiding PG & UG projects from 2014 onwards.

Projects Completed

Funded by : Centre for Research & Development,
Holy Cross Research Seed Grant (HCRSG),
Holy Cross College (Autonomous), Tiruchirappalli-2.

Project title: “Microwave assisted synthesis of silver nanoparticles from polyphenolic extract of *Terminalia chebula* bark and its antioxidant activity: A precursor for the drug delivery”.

Status : Successfully completed and publish a paper in Web of Science indexed Journal.

Papers presented in conferences: 20

Workshops and seminar attended: 16

Publication

Book Chapter Publication:

1. Dr. S. Vidhya, Dr. A. Leema Rose, Dr. F. Janeeta Priya, Gomphrena serrata Leaf Extract as Corrosion Inhibitor and Reductant for the Synthesis of Copper Nanoparticles the paper published for the Book Name: **Challenges and Advances in Chemical Science** Vol.1 (Ms. No.: 2021/BP/4278F), B P International book publisher.

2. Dr. F. Janeeta Priya, Dr. A. Leema Rose, Dr. S. Vidhya, Mr. A. Arputharaj, Anti-proliferative Effect on Breast Cancer Cell Line via Novel Biogenic Peptide Functionalized Silver Nanoparticles Synthesized from Aloin the paper is published for the Book Name: **Challenges and Advances in Pharmaceutical Research** Vol. 8 (Ms. No.: 2022/BP/8245F), B P International book publisher.

3. Priya, F. J. ., Rose , A. L. ., Vidhya , S. ., & Arputharaj, A. . (2023). Recent Advancement of Bio-inspired Nanomaterials and Its Antiurolithiatic Activity the paper published for the Book Name: **New Advances in Medicine and Medical Science** Vol. 7, 151–165. <https://doi.org/10.9734/bpi/namms/v7/9824F>, B P International book publisher.

4. Current Developments in Biological Science **Title:** Innovative Srsio₃/Tio₂ Photocatalysts For Efficient Solar Degradation Of Congo Red Dye, ISBN Number: 978-93-93622-73-0, October, **2024**.

Research Articles:

1 . S. Vidhya and Dr. A. Leema Rose , (2014) Evaluation of Solanum Nigrum Leaf Extract as a Corrosion inhibitor and Reductant for the Green Synthesis of Gold Nanoparticle ,*IJRDP*, 3 (3) 1011-1021.

2. DR. A. Leema rose, S. Vidhya* et.al, Kinetic Study on Green Synthesis of Gold Nanoparticles Using *Bougainvillea Glabra* Leaf Extract, *IJCPS Vol. 3, No. 5, Sep-Oct 2014*.

3. Leema Rose A, Vidhya S*, *Momordica charantia* as corrosion inhibitor and reductant for the green synthesis of gold nanoparticles, *International Journal of Chemical and Pharmaceutical Sciences* 2014, June., Vol. 5 .

4. Green Synthesis and Characterization of Gold Nanoparticles Using *Terminalia chebula* Leaf Extract, *IJSET*, Vol. 2 Issue 4, April 2015.

5. Thermodynamic, Adsorption And Electrochemical Studies For Corrosion Inhibition Of Carbon Steel By *Terminalia Chebula* Leaf Extract In 0.5 M HCl Medium, *International Journal of Modern Trends in Engineering and Research* , Volume 02, Issue 03, [March – 2015]

6. Dr,A,Leema Rose & S.Vidhya, Green synthesis of Gold nanoparticles using *Momordica charantia*, *International journal of scientific and Engineering Research*,vol-7,Issue 8,August-2016, P.No -162. ISSN:2229-5518.

7. Leema Rose A, Vidhya S, Corrosion inhibition study of bark extract of *Terminalia chebula* on mild steel in 0.5M hydrochloric acid medium, *International Journal of Applied and Pure Science and Agriculture*,P-59,ISSN:2394-823X,Impact Factor:3.762

8. Leema Rose A, Vidhya S , Inhibitive effect of fruit extract from *Terminalia chebula* on the corrosive of mild steel in 0.5M hydrochloric acid medium, *International Journal of Science, Engineering and Technology Research(IJSETR)*,V-5, P-1037, I-4, April 2016.

9. A.Leema rose , F.Janeeta Priya ,s. vidhya and preeja P thattil, antifungal and antioxidant activity of microwave assisted green synthesis of silver nanoparticles using aloin derivative . *The pharma innovation journal*, volume-6(9) 25-28, august -2017

10. A.Leema rose , F.Janeeta Priya ,s. vidhya and preeja P thattil, microwave assisted synthesis of nickel nanoparticle using hydrazine hydrate and its antimicrobial activity. *International journal of chemtech research*, vol- 10 no.10 pp 377-384. 2017.

11. A.Leema rose , F.Janeeta Priya and s. vidhya, comparative study on the synergistic action of differentially synthesized copper nanoparticles with *Escherichia coli* and *Staphylococcus aureus*. *International research journal of pharmacy* ,vol-8 no.9 pp 85-90. nov-2017.

12. Rekha. G, Leema rose.A and Vidhya. S, Proximate Nutritional Analysis of dried *Moringa Oleifera* Seed, *International Journal of Agriculture and Environmental Research*, Volume: 03, Issue:02, “March-April 2017” ISSN: 2455-6939.

13. S. Vidhya*, Dr. A. Leema Rose, Microwave Assisted Green Synthesis of Gold Nanoparticles using *Bougainvillea glabra* leaf extract, *Asian Journal of Chemistry*, Vol 29, No. 8(2017), 1757-1760, June 2017. Doi.org/10.14233/ajchem.2017.20610.

14. A.Leema rose , F.JaneetaPriya and s. vidhya, Cytotoxic effect of peptide

functionalized silver nanoparticles synthesized from aloin on breast Cancer cell line, Asian Journal of Pharmaceutical and Clinical Research, Vol 12, Issue 2, Feb 2019, 170-175, E- ISSN: 2455-3891, P-ISSN: 0974-2441, DOI: 10.22159.

15. S. Vidhya, A. Leema Rose and F. Janeeta priya, Potential investigation of Gomphrena serrata leaf extract as a corrosion inhibitor and as a reductant for the synthesis of copper nanoparticles, Asian Journal of Chemistry, Vol. 31, No. 10(2019), 2306-2310.

16. F Janeeta Priya, A Leema Rose, S Vidhya, A Arputharaj, R Ramya, JK Sruthi and Pa Harini Priya, Mosquito larvicidal activity of cost-effective bio-synthesized silver nanoparticles using mentha piperita extract against aedes aegypti, Rasayan J. Chem., 13(3), 1964-1970 (2020).

17. S. Vidhya, A. Leema Rose, F. Janeeta Priya, T. Keerthana and R. Priyadarshini, Anti-urolithiatic Activity of Silver Nanoparticles of Terminalia chebula Bark, Oriental Journal of Chemistry, Vol. 37, No. 1(2021): Pg. 109-115.

18. F. Janeeta Priya, A. Leema Rose, S. Vidhya, A Arputharaj, S. Akshana and U. F. Rameez Fathima, A New Frontier Drug Development in Nanomedicine and Its anti-Urolithiatic Activity of Kalanchoe Pinnata. Orient. J. Chem., Vol. 37(2), (2021).

19. A. Leema Rose, F. Janeeta Priya, S. Vidhya, Suitable synthesis of gold nanoparticles and its antidiabetic activity of *Anacardium occidentale* Root extract, Oriental Journal of Chemistry, Volume 37 No.(2), pp: 374-379, April 2021, ISSN: 0970-020 X

20. S. Durgadevi, A. Leema Rose, S. Vidhya, F. Janeeta Priya and P. Lydia Festus Kanmani, Corrosion Inhibition Activity of Isolated Flavonoid from Andrographis echioides Leaves, Orient. J. Chem., Vol. 38(5), 1276-1283 (2022).

21. S. Durgadevi, A. Leema Rose, S. Vidhya, F. Janeeta Priya and P. Lydia Festus Kanmani, In Vitro Antioxidant and Antimicrobial Activity of Isolated Flavonoid from the Methanolic Extract of Spermaceoce hispida Leaves, Intern. J. Zool. Invest. 8(Special Issue): 302-311, 2022.

22. F. Janeeta Priya, A. Leema Rose, S. Vidhya, Biogenesis of Metal Nanoparticles and its Potential Targeted Drug Delivery Systems for Urolithiasis, International Journal of Zoological Investigations Vol. 8, Spl 1, 23-28, Dec 2022.

23. F. Janeeta Priya, A. Leema Rose, S. Vidhya, Apoptotic effect of reduced Graphene Oxide on MCF-7 Breast cancer cell line using Asparagus Racemosus roots, Research Journal of Biotechnology, Vol. 18 (11) November (2023).

Subjects of Expertise

- Physical Chemistry
- Bio- Inorganic Chemistry
- Applied Chemistry

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