

V. SRIDEVI



*A passionate teacher and researcher
who strives hard to make a difference!*

CURRENT POSITION

Associate Professor & Head
Department of Chemistry
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Scopus id

<https://www.scopus.com/authid/detail.uri?authorId=6602866378>

Languages Known

English, Tamil

EDUCATION

Bachelor of Science: Chemistry, Madurai Kamaraj University, 1989 -92

Master of Science: Chemistry, Madurai Kamaraj university, 1992-94

Ph.D: Chemistry, Indian Institute of Technology Madras, India, 1994-98

AREAS OF RESEARCH

Polymer Nanocomposites, Metal nanoparticles, Carbon-based materials, Functionalised Nanomaterials for Sensor, Catalysis and Energy Applications and Water treatment.

RESEARCH ACOMPLISHMENTS

Research Grants

- Principal Investigator- UGC- Major Research scheme for the project titled Shape and Size Selective Synthesis of Gold Nanoparticles for Sensor Applications from 2013 to 2018 to a total cost of 12 lakhs INR
- Principal Investigator- UGC- Minor Research Project titled Studies on the Electrochemical Synthesis and Conductivity of Conductive Polymers from March 2001 to 2003 to a total cost of 31000 INR

RECENT PUBLICATIONS

- S. Mahalakshmi, **V. Sridevi**; Tailoring the synergy between polyaniline and reduced graphene oxide using organic acid dopant, pTSA for enhanced performance as electrode material for supercapacitor applications, **Journal of Physics and Chemistry of Solids**, 165, 110673, **2022**.
- S. Mahalakshmi, **V. Sridevi**; In Situ Electrodeposited Gold Nanoparticles on Polyaniline-Modified Electrode Surface for the Detection of Dopamine in Presence of Ascorbic Acid and Uric Acid, **Electrocatalysis**, 12:415–435, **2021**
- S. Mahalakshmi, **V. Sridevi**; Conducting, crystalline and electroactive polyaniline-Au nanocomposites through combined acid and oxidative doping pathways for biosensing applications: Detection of dopamine, **Materials Chemistry and Physics**, 235, 121728, **2019**.
- Esther. J, **Sridevi. V**; Colorimetric detection of cysteine based on dispersion–aggregation mechanism of chitosan stabilized gold nanoparticles, **Canadian Journal of Chemistry** 97 (3), 233-237, **2019**
- Esther.J, **Sridevi.V**; Synthesis and characterization of chitosan- stabilized gold nanoparticles through a facile and green approach. **Gold Bulletin**, 50, 1, 1-5, **2017**.

BOOK CHAPTERS

Contributed a chapter entitled “Ultraviolet and visible spectroscopy studies of nanofillers and their polymer nanocomposites” in **Spectroscopy of Polymer Nanocomposites**. Elsevier Publication, 2016, DOI: 10.1016/B978-0-323-40183-8.00006-9

OTHER PUBLICATIONS:

1. V.Sridevi, S. Malathi and C.S. Devi; Synthesis and Characterisation of Polyaniline/gold nanocomposites, *Chemical Sciences journal*, 23, 1-5, **2011**
2. R. Ramaswamy, **V.Sridevi** and S. Sankararaman; A new double substrate uncatalysed bromate oscillator. *Reaction Kinetics Catalysis Letters*, 74, 1, 41-49, **2001**.
3. **V.Sridevi** and R. Ramaswamy; Potential response in the uncatalysed bromate oscillatory system. *Reaction Kinetics Catalysis Letters*, 65, 1, 93-100, **1998**.
4. **V.Sridevi** and R. Ramaswamy; Propagating waves and pattern formation in a reaction-diffusion system with pyrogallol as the substrate. *Chemistry Letters*, 5, 459-460, **1998**.
5. **V. Sridevi** and R. Ramaswamy; A dual phase oscillatory behaviour in Belousov-Zhabotinsky system with vanillin as the substrate. *International Journal of Chemical Kinetics*, 30, 201-206, **1997**.
6. **V.Sridevi** and R. Ramaswamy; The Behaviour of hydroxyflavones in Belousov-Zhabotinsky oscillatory system. *Polyphenols Communications* 96, Bordeaux (France), 139-140, **1996**.

INTERNATIONAL VISITS :

- Completed an International Module on Global Leadership Training Program in Higher Education at Boston College, **Boston, U.S.A.** as the selected Fellow of United Board for Christian Higher Education in Asia (UBCHEA) during July 8-29, 2016
- Completed a two months educational program on Understanding the Higher Education at Seoul Women's University, **Seoul, South Korea** during October 4 – December 6, 2016.
- Attended the Leadership seminar at **Singapore** as the selected Fellow of United Board for Christian Higher Education in Asia during June 10-14, 2017
- Attended the international Conference on Innovation in Education: Opportunities and Challenges in Southeast Asia, co-hosted by the United Board and Soegijapranata Catholic University in **Semarang, Indonesia**, October 29-30, 2019

AWARDS AND HONOURS:

- Recipient of PG CHEMISTRY Silver Jubilee Gold Medal for securing the highest percentage in the M.Sc. Chemistry Program
- Secured All-India Rank 89 in the GATE -94 in Chemistry Discipline
- Recipient of Summer Visiting Teacher Research Fellowship of the Indian Academy of Sciences, Bangalore, 2004
- Recognised by DST, New Delhi as the MENTOR- DST INSPIRE activities

CONTRIBUTION TO SCIENCE EDUCATION AND RESEARCH:

- Recognised by DST, New Delhi as the MENTOR- DST INSPIRE activities
- **Invited –Teacher member** of the Science Education Panel of Indian Academy of Sciences, Bangalore during 2005 and 2006
- Coordinator of M.Sc. Nanoscience program at Lady Doak College, supported by UGC under XI Plan Innovative Program Scheme
- Subject Expert, Board of Studies of the Department of Chemistry,

Theivanai Ammal College for Women, Villupuram

The American College, Madurai

Sri Meenakshi Govt. College, Madurai

Jamaal Mohammed College, Trichy

G.T.N Arts College, Dindigul

K.L.N College, Madurai
- External Expert, Internal Quality Assurance Cell, National College, Trichy
- Academic Auditor for the Department of Chemistry, National College, Trichy
- **Journal Reviewer: Journal of Electroanalytical Chemistry, Polymer Bulletin and Canadian Journal of Chemistry**

INVITED TALKS:

- **Assessment on the Technology-Enhanced Flexible Learning** in the 12 weeks Open Online Course on Technology-Enhanced Flexible Learning by Silliman University, Philippines on November 20, 2021.
- Faculty Development Programme on **Teaching, Learning & Evaluation Strategies on Question Paper Setting: A Cognitive Level Based Approach**, organized by Bhavan's Vivekananda College, Secunderabad on September 3, 2021.
- Seven day – Online Enrichment Programme on **Holistic Development of Teachers**, organized by Tamilnadu Teachers Education University Training and Placement Cell, Chennai and V.O.C College of Education, Thoothukudi on August 6, 2020.
- National Science Day Conclave and National Colloquium on Current Science, **Young Women Scientists' Congregation** organized by IQAC, Sri Sarada College for Women, Tirunelveli on February 28, 2020
- **Recent Trends in Chemistry** organized by SVN College, Madurai on February 22, 2017.

- Workshop on **Fostering Higher Order Thinking Skills** for the faculty members of Vellore Institute of Technology, Vellore on 7th January, 2017
- **Quality Assurance And Quality Sustance In Higher Educational Institutions: Challanges and Solutions** organized by Jeyaraj Annapackiam college for women, Periyakulam on 29th September, 2016.
- **Recent Advances in Nanoscience** organized by Auxilium College, Vellore on 21-22nd November 2014.
- **Nanochemistry** in a one – day Faculty Development Programme on Chemistry organized by Velammal College of Engineering & Technology, Madurai on 14th August 2013
- **Size and Shape Selective Gold Nanoparticles for Sensor Applications** in the National Conference on Approaches to Applications of Nanoscience and Nanotechnology (AANN-2013) organized by Ayya Nadar Janaki Ammal College, Sivakasi on 13th September 2013
- **DST-INSPIRE program** organized by St. Xavier's Catholic college of Engineering, Nagercoil and Kamadhenu Arts and Science College, Sathyamangalam during July 2013.

PRESENTATIONS IN CONFERENCES:

i) International Conferences

1. T.Pandiselvi and **V.Sridevi**, Tuning the bandgap of layered MoS₂ nanosheets and evaluation of photocatalytic property. Paper presented in the International conference on *Advancements in Material science and Technology -iCAM 2022*, organized by Sathyabama Institute of Science and Technology, Chennai, during November 02-04, **2022**.
2. **V. Sridevi and S. Pitchumani Angayarkanni**, Augmented Reality for Experiential Learning of Concepts in Science. Paper presented in the International Conference on *Innovation in Education: Opportunities and Challenges in Southeast Asia*, co-hosted by the United Board and Soegijapranata Catholic University in Semarang, Indonesia, October 29-30, **2019**.
3. **V.Sridevi** and J.Esther, A Green Approach towards the Synthesis of Dendrite Encapsulated Gold Nanoparticles. Paper presented in the *12th International Conference of Toxicogenomics-2016* held at KyungHee University College of Medicine, Seoul, South Korea during November 10-12, **2016**.
4. J.Esther, P.Indumathi, T.Nihaarpaveen, and **V.Sridevi**; Synthesis and characterization of gold and silver nanoparticles using bio-compatible polymers. Paper presented in the *National Conference on Smart Materials*, **2016**.
5. J.Esther and **V.Sridevi**, Synthesis of biocompatible gold nanoparticles using chitosan and carboxymethylchitosan matrices. Paper presented in the *13th Eurasia Conference on Chemical Sciences* held at Indian Institute of Science, Bangalore, India, during December 14-18, **2014**.
6. C. Sivagami , P. Mahalakshmi , S. Mahalakshmi , **V. Sridevi**, Selective determination of Dopamine in presence of Uric acid using nano-Gold clusters embedded PANI modified electrode. Paper

presented in the *International Conference on Electrochemical Science and Technology*, held at Indian Institute of Science, Bengaluru, India, during August 7-9, **2014**.

7. C. Saranya Devi, **V. Sridevi** and M. V. Ananth, Synthesis and Characterization of $\text{Li Co}_{(1-x)/3}\text{Mn}_{(1-x)/3}\text{Ni}_{(1-x)/3}\text{Cr}_x\text{O}_2$ ($x=0$ to 0.6) as Cathode Materials for Lithium-Ion Batteries. Paper presented and **awarded the best paper award** in the *International Conference on Green Chemistry and Sustainable Environment (GCASE-2010)* held at Tiruchirappalli, Tamilnadu, India, during July 7th and 8th **2010**.
8. **V. Sridevi** and R. Ramaswamy. A novel bromate driven oscillator involving an organic redox system. Paper presented in the *International Conference on Chemical and Biological Thermodynamics*, held at Amritsar, India, during Jan 5-8, **1997**.
9. **V. Sridevi** and R. Ramaswamy. The Behaviour of hydroxyflavones in Belousov-Zhabotinsky oscillatory system. Paper presented in the *XVIII International Conference on Polyphenols*, held at Bordeaux, France, during July 15-18, **1996**

ii) National Conferences / Seminars

1. S. Mahalakshmi and **V. Sridevi**. Tuning the electrical conductivity of polyaniline/gold nanocomposites by altering the charge-transfer mechanism in the polymer chain. Paper presented in the National Conference on Emerging Trends in Smart Materials NCETSM'-2018 organized by the Department of Chemistry, SSN College of Engineering, Kalavakkam, Chennai on 19th January, **2018**.
2. S. Mahalakshmi and **V. Sridevi**. Chemical and electrochemical modification of GCE/PANI surface using metallic Au towards dopamine detection. Paper presented in the Recent Advances in the Applications of Macromolecular Materials (Raamm-2017) held at The Gandhigram Rural Institute - Deemed University, Tamilnadu, India, during 2nd & 3rd March, **2017**.
3. J.Esther and **V. Sridevi**. Chitosan stabilized biocompatible gold nanoparticles for enhanced catalytic reduction of 4-nitrophenol. Paper presented in the *National Conference on New Frontiers in Chemistry- From Fundamentals to Applications*, held at BITS Pilani, Goa Campus during 18 and 19 December, **2015**.
4. J.Esther and **V. Sridevi**. Solvent influenced shape and size selective synthesis of gold nanoparticles using chitosan. Paper presented in the Recent Advances in Chemical Sciences (RACS – 2015) held at The Gandhigram Rural Institute - Deemed University, Tamilnadu, India, during 5 & 6th March, **2015**.
5. R.Deepa, R.LakshmiPriya and **V.Sridevi**. Indigenous, eco-friendly and cost-effective sewage water treatment process at Lady Doak College, Madurai. Paper presented in the *National Conference on Recent Advances in water and waste water management*, held at Gandhigram Rural Institute-Deemed University, Gandhigram, Tamilnadu during 2^{1st} and 2^{2nd} March, **2014**.

6. **V. Sridevi**, S. Malathi and S. KovilSelviCilba. Chemical Synthesis of Conducting Polyaniline using different dopant acids. Paper presented in the *Asian Conference on Recent Advances in Polymer Science*, held at SASTRA University, Thanjavur on 22nd & 23rd January, **2010**.
7. **V. Sridevi**, S. Malathi and C. Sivagami. Electrochemical synthesis and Biosensor applications of doped Polyaniline films. Paper presented in the *National Conference on Recent Advances in Electroanalytical Techniques*, Gandhigram Rural Institute-Deemed University, Gandhigram, on 25th & 26th February, **2010**.
8. **V.Sridevi** and G. JeyanthiKalaivani. A Journey of Technology from the world of macro to micro to nano to Paper presented in the *National Seminar on Recent Trends in Chemistry*, held at Jayaraj Annapackiam College for Women, Periyakulam on 27th & 28th September, **2006**.
9. **V.Sridevi and A. Akalya**. Synthesis and Characterization of doped polyanilines in Micellar medium. Paper presented in the *Thirteenth National Convention of Electrochemists (NCE-13)*, held at CECRI, Karaikudi on 5th & 6th May, **2006**.
10. R. Ramaswamy, **V. Sridevi** and S. Sankararaman. Novel oscillatory reactions employing dual substrates. Paper presented in the *National Symposium on Electrochemical Science and Technology*, held at I.I.Sc., Bangalore on 28th & 29th July, **2000**.
11. **V.Sridevi**. Reaction Mechanism of nonlinear chemical system. Paper presented in the *Seminar on Recent Advances in Reaction Mechanism*, held at VHNSN College, Virudhunagar, on 29th March, **2000**.
12. **V.Sridevi** and R.Ramaswamy. New experimental findings in the bromate oscillatory system employing mixed catalysts. Paper presented in the *32nd Annual Convention of Chemists 1995*, held at Jaipur, during December 26-29, **1995**.
13. **V.Sridevi** and R. Ramaswamy. Perturbation of the Cerium(IV) catalysed oscillatory systems by EDTA. Paper presented in the *Seminar on Recent Developments in the Science and Technology of Rare Earths*, held at Cochin, during December 14-16, **1995**.
