



## CURRICULUM VITAE

### **Residential Address:**

**Dr. T. Shankar, M.Sc., Ph.D.,**  
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### Educational qualification

- ❖ **Bachelor of Science (Chemistry), 1998-2001– First Class**  
Chikkaiah Naicker College, Erode, Affiliated to Bharathiar University, Coimbatore, India.
- ❖ **Master of Science (Industrial Chemistry), 2001-2003 – First Class**  
A.V.V.M.Sri Pushpam College, Poondi, Thanjavur, Affiliated to Bharathidasan University, Tiruchirapalli, India.
- ❖ **Doctor of Philosophy (Chemistry), 2003-2009**  
**Degree Awarded** : April 2009, Madurai Kamaraj University  
**Title of the Thesis**: “Phytochemical, Synthetic and Biological Studies of Oxygen Heterocycles”  
**Thesis Advisor** : **Prof. R. Gandhidasan**, Department of Natural Products Chemistry, School of Chemistry, Madurai Kamaraj university, Madurai –21, India.

### Post Doctoral Research Experience

**Postdoctoral research fellow, April 2010 - 30 Sep 2012 – (Two years and Six months)**

**Awarding Agency** : National Science Council (Research Grants NSC99-2811-M018-011) and National Tsing Hua University (NSC99-2323-B-007-001) - Taiwan

National Changhua University of Education (*NCUE*), Taiwan - with **Prof.Yean-Jang Lee**  
(Organic chemistry, Natural Products and Medicinal chemistry)

### Professional Experience

**Temporary Assistant Professor (15<sup>th</sup> July 2023 to till date),**

Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli.

**Temporary Assistant Professor (1<sup>st</sup> October 2020 to 15<sup>th</sup> May 2023),**

Department of Environmental science, SPKCEES, M S University, Tirunelveli.

**Temporary Assistant Professor (18<sup>st</sup> July 2019 to 15<sup>th</sup> May 2020),**

Department of Pharmaceutical Chemistry, Manonmaniam Sundaranar University, Tirunelveli.

**Temporary Assistant Professor (22<sup>nd</sup> July 2014 to 15<sup>th</sup> May 2019),**

Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli.

Total Years of Teaching Experience: **10 Academic Years**

**Teaching** (at post graduate and M. Phil. level): Organic Chemistry and Inorganic Chemistry

**Directions to student’s research** Supervision of Post graduate research projects: **23** Completed.

### List of Publications (National/International)

1. Newer constituents of *Derris indica* stem; **T. Shankar**, S. Muthusubramanian, R. Gandhidasan, *Nat. Product Comm.*, 2008, 3(8), 1329-1331.
2. A chromanone alkaloid from *Derris ovalifolia* stem; **T. Shankar**, S. Muthusubramanian, R. Gandhidasan, *Nat. Product Res.*, 2009, 23(17), 1652 – 1656.

3. Synthesis and characterization and anti-inflammatory and antibacterial evaluation of 3-arylidene-7-methoxychroman-4-ones; **T. Shankar**, R. Gandhidasan, S. Venkataraman, **Indian J. Chem.** 2011, 50B, 1202-1207.
4. Total synthesis of monoilformediquinone and calanquinone A as potential inhibitors for breast cancer; **Shankar Thangaraj**, Wen-shing Tsao, Yi-wei lu, Yean-jang Lee, Chia-fu chang, Chun-Cheng lin, Biing-jiun Uang, Chia-chun Yu, Jih-hwa Guh, Che-ming Teng, **Tetrahedron**, 2011, 67, 6166-6172.
5. Photodynamics of silica Coated CdS Nanoparticles; Kalaiyar Swarnalatha, Subramaniam Kamalesu, **Thangaraj Shankar**, T. Antony Rajasekar, **Int. J. Emg. Tech. & Adv. Engg.**, 2013,3(6),660-664.
6. Evaluation of the Antibacterial Efficacy of *Abutilon Indicum* Root Extract Assisted Silver Nanoparticles; **T. Shankar**, P. Karthiga, K. Swarnalatha, **International Journal of Green and Herbal Chemistry**, 2016,5(3)180-189.
7. Green synthesis of silver nanoparticles using *Capsicum frutescence* and its intensified activity against *E. coli*; **T. Shankar**, P. Karthiga, K. Swarnalatha, K. Rajkumar, **Resource-Efficient Technologies**, 2017, 3, 303–308.
8. Synthesis and Antibacterial Evaluation of Tetrahydropyrimidine-5-carboxamide; N. Edayadulla, S. Anand, **T. Shankar\***, **Asian Journal of Chemistry**, 2018, 30(2), 254-256.
9. Co-sensitization of Ruthenium(II) Dye-Sensitized Solar Cells by Coumarin based dyes; Anish Babu, T.Shankar, K. Swarnalatha, **Chemical Physics Letters**, 2018, 699, 32-39.
10. Amine functionalized homoleptic ruthenium (II) sensitizer for dye-sensitized solar cells: A combined effect of ancillary ligands and co-sensitization; Anish Athanas, K Subramaniam, Shankar Thangaraj, Swarnalatha Kalaiyar, **International Journal of Energy Research**, 2020, 44 (3), 1899-1908.
11. Phytomediated synthesis of silver nanoparticles against microbial pathogens and cytotoxicity on human breast cancer cells (MCF-7), P Karthiga, T Shankar, K Karthick, K Swarnalatha, **Resource-Efficient Technologies**, 2020, 2, 16-24.
12. A new tetradentate Schiff base of N, N'-bis (3, 5-diiodosalicylidene)-1, 2-phenylenediamine: Spectral aspects, Hirshfield surfaces, DFT computations and molecular docking, H Dhilshath Raihana, K Karthick, T Shankar, S Kamalesu, A Anish Babu, K Swarnalatha, **Journal of Molecular Structure**, 2022, 1264, 133217.
13. A new Ruthenium (II) sensitizer with anchored hydrazide ligand for enhanced electron injection in dye sensitized solar cell application, Subramaniam Kamalesu, Athanas Anish Babu, Thangaraj Shankar, Kalaiyar Swarnalatha, **Inorganic Chemistry Communications**, 2022, 139,109382.
14. 3d Fluorescence spectral analysis and molecular modeling studies on the interaction of Benzimidazole functionalized Ruthenium(II) polypyridyl complexes with bsa, Kamaraj Karthick , Pavul Sundaram Jeba Sagana , Thangaraj Shankar, Kalaiyar Swarnalatha, **Journal of pharmaceutical negative results**, 2022, 13, 3851-3871.
15. In Vitro and In Silico Screening of Benzimidazole-Based Ruthenium(II) Complexes as Potent ALK Inhibitor for Cancer Prevention, Kamaraj Karthick, Muthukumar Abinaya, Thangaraj Shankar, Kalaiyar Swarnalatha, **Applied Biochemistry and Biotechnology**, 2023,195(12),7397-7413..

#### Book chapters:

- Exploring Chemistry with Pyridine Derivatives Edited by Satyanarayan Pal; Chapter-4 :Naturally Isolated Pyridine Compounds Having Pharmaceutical Applications; written by Edayadulla Naushad and Shankar Thangaraj Submitted: July 4th, 2022 Reviewed: July 20th, 2022 Published: August 27th, 2022 DOI: 10.5772/intechopen.106663.

#### Details of Patents, Orientation/FDP attended, Membership in professional bodies etc.

- Teaching Learning Centre Ramanujan College University Of Delhi Sponsored By Ministry Of Human Resource Development Panditt Madan Mohan Malaviya National Mission On Teachers And Teaching, **Dr. T. Shankar**, Pharmaceutical chemistry, Manonmaniam Sundaranar University, Tirunelveli successfully completed a 4-Week Induction/Orientation Programme for "Faculty in Universities / Colleges/Institutes of Higher Education" from June 04 - July 01, 2020.

## **Online NPTEL-MOOCs Certifications**

1. Stereochemistry (8 week) (**July to September - 2019**)
2. Biochemistry (12 week) (**January to April - 2020**)
3. \*Metal Mediated Synthesis-I (4 week) (**July to August - 2021**)
4. \*\*Analytical Chemistry (12 week) (**July to October - 2021**)
5. A Study Guide in Organic Retrosynthesis: Problem Solving Approach (12 week) (**January to April - 2022**)
6. Reagents in Organic Synthesis (12 Week) (**July to October - 2023**)
7. \*Industrial Inorganic Chemistry (12 Week) (**Jan to April - 2024**) (Also served as Mentor for 40 students,)

\* Elite, \*\*Elite + Silver

## **Achievement and awards**

- Phytofabricated surface plasmon Au-Ag bimetallic nanoparticles from the leaf extract of *Rhinacanthus nasutus* and its in vitro cytotoxicity; D. Sumithra, S. Rajadurai pandian, **T.Shankar**, conference Title “Uses of Nanomaterial in Daily Life” National E-Poster Presentation Competition organized by Association of chemistry teachers (ACT), Mumbai and BJS ASC College, Wagholi,Pune, conducted in January 2022. (*National E-Poster Presentation Competition- Second Prize, held on 28<sup>th</sup> February 2022, National Science day*)
- Recognized by NPTEL for *top performance as a mentor* in Industrial Inorganic Chemistry Course.

## **Sessions chaired**

- 5<sup>th</sup> International Conference on Recent Trends in Applied Science and Technology (ICRTAST-2021) organized by Department of Chemistry, Manonmaniam Sundaranar University, Tirunelveli, India, November 25-28, 2021.
- INSPIRE INTERNSHIP SCIENCE Camp organized for XI Students to create science awareness programme during October 18th -22nd , 2019 funded by DST, NewDelhi.

## **No. of National/International Seminars and Conferences participated: 36**

## **Other Skills**

- ❖ Proficiency in Computer Operations and Working knowledge in Softwares like Chemdraw, ISIS draw MS Origin, computer-based literature research technique (Sci-finder) etc.