

Dr. C. SANKAR

Associate Professor and Head

Department of Chemistry

Velammal College of Engineering and Technology

Madurai – 625 009, Tamil Nadu, India. E. Mail: csk@vcet.ac.in

**Educational Qualification:**

| S. No | Degree | Year | Subject / Course | University / Institution |
|-------|--------|------|------------------|--------------------------|
| 1 | Ph.D | 2012 | Chemistry | Annamalai University |
| 2 | M.Phil | 2004 | Chemistry | Annamalai University |
| 3 | M.Sc | 2002 | Chemistry | Annamalai University |
| 4 | B.Sc | 2000 | Chemistry | University of Madras |

Employment History:

| S. No | Position | Name of the Institution | Lecture Courses | Years of Experience (Years) |
|----------------------------------|---------------------|--|--|--------------------------------------|
| 1 | Associate Professor | Velammal College of Engineering and Technology | Engineering Chemistry Environmental Science | 2023 rd August onwards |
| 2 | Assistant Professor | SRM-TRP Engineering College, SRM University, Trichy campus | Engineering Chemistry –I Engineering Chemistry –II Environmental Science and Engineering | 9.11 |
| 3 | Assistant Professor | Kalasalingam University | Engineering Chemistry –I Engineering Chemistry –II Environmental Science and Engineering Nano-Biotechnology | 1.10 |
| Total Years of experience | | | | 12.8 |

Awards and Fellowships:

- ❖ Research Fellowship from 11.12.2008 to 10-12-2010 by University Grants Commission (UGC) in SAP scheme, New Delhi, India.
- ❖ Junior Research Fellowship: (2004-2007) Project Fellowship awarded by University Grants Commission (UGC), New Delhi, India.

Recognized PhD Supervisor (Guide ship):

| S. No | Name of the University | Ref. No. |
|-------|------------------------|------------|
| 1 | Anna University | 2570067 |
| 2 | Bharathiar university | CHE-GU3629 |

Research Areas:

- ❖ Fabrication of nano materials and its sensor applications
- ❖ Synthesis of novel heterocyclic compounds for biological applications.

Patent rights received:

- ❖ Nano-fiber-reinforced glass ceramic matrix composites for advanced applications. Indian Design Patent, Design Number :202341060896, Grant date : 16 October 2023
- ❖ Microreactors for the synthesis of nanoparticles, UK Design Grant, Design number: 6355651, Grant date: 11 April 2024

Scientific Publications:

- ❖ Google Scholar Citation: <https://scholar.google.co.in/citations?user=L2CSPcsAAAAJ&hl=en>
- ❖ Scopus Citation : <https://www.scopus.com/authid/detail.uri?authorId=55627877229>
- ❖ ORCID: <https://orcid.org/0000-0003-0872-9923>

| S.No | Publication Details | Impact Factor |
|------|---|---------------|
| 1 | M. Ramesh, S. Umamatheswari, P. M. Vivek, C. Sankar , and R. Jayavel. Synthesis of silver-bismuth oxide encapsulated hydrazone functionalized chitosan (AgBi ₂ O ₃ /FCS) nanocomposite for electrochemical sensing of glucose, H ₂ O ₂ and Escherichia coli O157:H7. <i>Inter.J.Bio.Macro.</i> (2024)264, 130533. https://doi.org/10.1016/j.ijbiomac.2024.130533 (Science Direct) | 8.2 |

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|---|--|------|
| 2 | M. Ramesh, S. Umamatheswari, C. Sankar , and R. Jayavel Sonochemical Synthesis of Ag-Functionalized Fe ₂ O ₃ Nanocomposites for the Highly Sensitive Electrochemical Detection of Ractopamine and H ₂ O ₂ . <i>ACS Appl. Nano Mater.</i> (2024) 7, 3, 2929–2938. https://doi.org/10.1021/acsnm.3c05236 (ACS Publication). | 5.9 |
| 3 | M. Ramesh, S. Umamatheswari, C. Sankar , and R. Jayavel Zn@ZrO ₂ Nanoparticles Decorated on Naringin- Based Sensor for Electrochemical Detection of p-Nitrophenol and o-Nitrophenol. <i>New J. Chem.</i> , (2024) 48, 2962. https://doi.org/10.1039/D3NJ05410A . (Royal Society of Chemistry) | 3.93 |
| 4 | M. Ramesh, C. Sankar , S. Umamatheswari, and R. Jayavel. A facile synthesis of CuZrO ₂ nanoparticles functionalized Chitosan for capable and stable non-enzymatic electrochemical detection of glucose and H ₂ O ₂ . <i>New J. Chem.</i> (2023) https://doi.org/10.1039/D3NJ02177G (Royal Society of Chemistry) | 3.93 |
| 5 | M. Ramesh, C. Sankar , S. Umamatheswari, R. Ganapathi Raman, R. Jayavel, Dongjin Choi and A.G. Ramu. Silver-functionalized Bismuth oxide nanoparticles (AgBi ₂ O ₃) for superior electrochemical detection of Glucose, NO ₂ ⁻ and H ₂ O ₂ . <i>RSC Adv.</i> , (2023) 13, 20598-20609. https://doi.org/10.1039/D2RA08140G . (Royal Society of Chemistry) | 4.03 |
| 6 | N. Ravisankar, N. Sarathi, T. Maruthavanan, S. Ramasundaram, M. Ramesh, C. Sankar , S. Umamatheswari, G. Kanthimathi, Tae Hwan Oh. Synthesis, Antimycobacterial screening, Molecular docking, ADMET prediction and Pharmacological evaluation on novel pyran-4-one bearing Hydrazone, Triazole and Isoxazole moieties: Potential inhibitors of SARS CoV-2. <i>J. Mole. Struct.</i> (2023) 135461. https://doi.org/10.1016/j.molstruc.2023.135461 . | 3.80 |
| 7 | M. Ramesh, C. Sankar , S. Umamatheswari, J. Balamurugan, R. Jayavel, M. Gowran. Hydrothermal Synthesis of a ZnZrO ₂ /Chitosan (ZnZrO ₂ /CS) nanocomposite for highly sensitive detection of glucose and hydrogen peroxides. <i>Inter. J. Bio. Macro.</i> 223 (2023) 618-627. https://doi.org/10.1016/j.ijbiomac.2022.11.31 . (Science Direct) | 8.20 |
| 8 | G Kanthimathi, O Senthilkumar, C Sankar , B.S. Prathibha, S.M. Senthil Kumar. Green Synthesis of Silver Nanoparticles using Vitex Negundo Extracts and their Application in the Effluent Treatment of Cracker Industries. <i>J. of Physics: Conference Series.</i> 2070 (2021) 012034. https://doi.org/10.1088/1742-6596/2070/1/012034 . | 0.48 |

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|----|---|------|
| 9 | P. Sangeetha, C. Sankar, K. Tharini, New thiazolidinone substituted 2,6-diarylpiperidin-4-one: Synthesis, Crystal structure, Spectral characterization, Binding mode with calf thymus DNA. <i>J. Mol. Struct.</i> 1198 (2019) 126899. https://doi.org/10.1016/j.molstruc.2019.126899 (Science Direct) | 3.80 |
| 10 | M. Mangalam, C. Sebastian Antony Selvan, C. Sankar. Synthesis, stereochemical, structural, and biological studies of a series of N'-(2 <i>r</i> ,4 <i>c</i> -diaryl-3-azabicyclo[3.3.1]nonan-9-ylidene)pyrazine-2-carbohydrazides. <i>J. Mol. Struct.</i> 1129 (2017) 305-312. https://doi.org/10.1016/j.molstruc.2016.09.033 . (Science Direct) | 3.80 |
| 11 | C. Sankar, S.Umamatheswari, Synthesis, Identification and in vitro biological evaluation of some novel quinoline incorporated 1,3-thiazinan-4-one derivatives. <i>Bioorg. Med. Chem. Letts.</i> 27 (2017) 695-699. https://doi.org/10.1016/j.bmcl.2016.06.038 . (Science Direct) | 2.70 |
| 12 | C. Sankar, S.Umamatheswari, K. Pandiarajan. Conformational study of some 3 <i>t</i> -alkyl-2 <i>r</i> ,6 <i>c</i> -diarylpiperidin-4-one N-isonicotinoylhydrazones. <i>J. Mol. Struct.</i> 1083 (2015), 27-38. https://doi.org/10.1016/j.molstruc.2014.10.015 . (Science Direct) | 3.80 |
| 13 | C. Sankar, S.Umamatheswari, K. Pandiarajan. NMR, X-ray and Conformational study of some 2,6-diarylthian-4-one N-isonicotinoylhydrazones. <i>J. Mol. Struct.</i> 1076 (2014) 554-563. https://doi.org/10.1016/j.molstruc.2014.07.080 . (Science Direct) | 3.80 |
| 14 | John Francis Xavier, K. Krishnasamy, C. Sankar. Synthesis and antibacterial, antifungal activities of some 2 <i>r</i> ,4 <i>c</i> -diaryl-3-azabicyclo[3.3.1]nonan-9-one-4-aminobenzoyl hydrazones. <i>Med. Chem. Res.</i> 21 (2012) 345-350. https://doi.org/10.1007/s00044-010-9528-6 . (Springer Link) | 2.60 |
| 15 | C. Sankar, K. Pandiarajan. Synthesis and anti-tubercular and antimicrobial activities of some 2 <i>r</i> ,4 <i>c</i> -diaryl-3-azabicyclo[3.3.1]nonan-9-one N-isonicotinoyl hydrazone derivatives. <i>Eur. J. Med. Chem.</i> 45 (2010) 5480-5485. https://doi.org/10.1016/j.ejmech.2010.08.024 . (Science Direct) | 6.70 |
| 16 | C. Sankar, K. Pandiarajan, A. Thiruvalluvar, P. Gayathri. (<i>E</i>)-N-(3,3-Dimethyl-2,6-diphenylpiperidine-4-ylidene)isonicotinohydrazide. <i>Acta Crystallographica.</i> E66, (2010) o2841. https://doi.org/10.1107/S1600536810040936 . (Wiley Interscience) | 0.41 |

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| 17 | <p>C. Sankar, P. Aravindan, S. Anandan, P. Maruthamuthu, Stopped-flow kinetic investigations of one-electron transfer reactions of 4,4'-diaminodiphenylmethane and its radical cation in aqueous solution. <i>Indian J. Chem.</i> 44A (2005) 2218-2227.</p> <p>http://nopr.niscpr.res.in/handle/123456789/20225.</p> | 0.49 |
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Service as a Reviewer:

| S.No | Journal Name | Publishers |
|------|--|-----------------|
| 1 | Journal of Molecular Structure | Science Direct |
| 2 | Chemical Data Collection | Science Direct |
| 3 | Results in Chemistry | Science Direct |
| 4 | European Journal of Medicinal Chemistry | Science Direct |
| 5 | International Journal of Biological Macro Molecules | Science Direct |
| 6 | Medicinal Chemistry Research | Springer |
| 7 | ACS Omega | ACS |
| 8 | Journal of Inorganic and Organometallic Polymers and Materials | Springer Nature |

Association with Professional Bodies

| Name (Professional Body) | IAENG | IRED | ISC (Indian Science Congress) |
|--------------------------|--------|----------------|-------------------------------|
| Type of Membership | | SENOIE MEMBER | Life Member |
| Membership No. | 185820 | SNM10100059612 | |

Book Written:

| Title | Authors | Year | Publisher |
|---------------------------------------|--------------------------------|------|---------------|
| Environmental Science and Engineering | Mr. A.Veeraraj & Dr. C. Sankar | 2017 | SCM Publisher |

International / National Conference Presentation: (15/35)

| S. NO | NAME OF AUTHORS | TITLE | EVENT | ORGANIZATION | DATE |
|-------|---|--|---|---|-----------------------------|
| 1 | M. Ramesh C. Sankar K. Chinnasamy S.Umamatheswari | Synthesis of Zn doped ZrO ₂ nanocomposite for non-enzymatic H ₂ O ₂ sensing | International Conference On Smart Materials Chemistry (CHEMSMAT – 21) | Department of Chemistry, St. Joseph's College (Autonomous), Tiruchirappalli | 29-31 July 2021 |
| 2 | M. Ramesh, C. Sankar , S.Umamatheswari | Highly Sensitive Non-Enzymatic Electrochemical Glucose Sensor Based on Zn doped ZrO ₂ nanocomposite | International Virtual Conference On Chemical Research For Sustainable Development (ICCRSD-2021) | Department of Chemistry, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-89 | 24, 25th Sep 2021 |
| 3 | M. Ramesh C. Sankar S. Umamatheswari | A Novel Non-Enzymatic electrochemical glucose sensor based on Cu Doped ZrO ₂ Nanoparticles | International Conference on Recent Advances in Chemistry – 2021 | Department of Chemistry and Tamil Nadu Common Wealth Mother Teresa Women's International Centre, Mother Teresa Women's University, Kodaikanal - 624 102 | 25, 26th Nov 2021 3, 4th |
| 4 | M. Ramesh C. Sankar S. Umamatheswari | A novel non-enzymatic electrochemical glucose sensor based on CuZrO ₂ nanocomposites modified glassy carbon electrode | International Virtual Conference On "Futuristic Aspects of Sensors and Biosensors" (IVCFASB-2022) | PG and Research Department of Chemistry, Holy Cross College (Autonomous), Tiruchirappalli-620 002 | Mar 2022 |
| 5 | M. Ramesh C. Sankar S. Umamatheswari | Synthesize Characterization of Chitosan/CuZrO ₂ nanocomposites for non-enzymatic hydrogen peroxide sensing. | National Conference on Nanomaterials Driven Advances in Chemical and Biosensors (NANOSE-2022) | Department of Bioelectronics and Biosensors, Alagappa University, Karaikudi – 630 003 | 23 – 25th Mar 2022 |

Online Courses:

❖ **NPTEL**

1. Ecology and Environment. Aug/Oct. 2018
2. Selection of Nano-materials for energy harvesting and storage Applications - Elite group with 73 %. Jul/Aug – 2019
3. Coordination Chemistry (Chemistry of transition elements). Sep/Dec. – 2020