

CURRICULUM VITAE

Muthumanickam S

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Objective

Seeking a challenging environment that explores my knowledge and an opportunity for continuous updates with creativity, thereby to provide new ideas and stimulates personal and professional growth.

Research Interest

Catalysis and fine chemical synthesis, Organic synthesis and Material development for industrial application, Corrosion inhibition by green and organic inhibitor, developing the chemosensor for cations and anions..

Research & Working Experience

- May 2016 – Feb 2018 : Project Fellow under the guidance of **Dr. K. Selvakumar**, Assistant Professor of Chemistry, Thiagarajar College, Madurai-625009.
- Feb 2018 – Dec 2022 : Research Scholar under the guidance of **Dr. K. Selvakumar**, Assistant Professor of Chemistry, Thiagarajar College, Madurai-625009.
- Dec 2022 – May 2023 : Assistant Professor, Department of Science and Humanities, Pandian Saraswathi Yadav Engineering College, Sivaganagi-630561.
- July 2023 – Till date : Assistant Professor of Chemistry, Mannar Thirumalai Naicker College, Madurai-625 004.

Skills

- Handling air and moisture sensitive chemicals under N₂ atmosphere
- Preparing the dry solvents for cross-coupling reactions
- Heterogeneous catalyst development
- Conduct air and moisture free reaction
- Monitoring the reaction progress using thin layer chromatography (TLC)
- Separation of products from reaction mixture by column chromatography
- Preparation of sample for NMR analysis and interpreting NMR of the compounds
- Interpreting the HRMS data for the synthesized compound
- Electrochemical sensor
- Adsorption of environmental hazardous compounds
- Development of fluorophores

- Interpreting XRD, XPS, FESEM, HRTEM and TGA.
- Handling of UV-Vis, FT-IR, Fluorescence spectrophotometer
- Handling of CHI electrochemical workstation
- Writing original manuscript and reviewing the manuscript for publishing.

Education

B. Sc. (Chemistry)	: 2010-2013 Chikkaiah Naicker College, Bharathiar University, Tamilnadu, India.
M. Sc. (Chemistry Special)	: 2013-2015 Thiagarajar College, Madurai Kamaraj University, Tamilnadu India.
M. Phil (Chemistry)	: 2015-2017 Thiagarajar College, Madurai Kamaraj University, Tamilnadu India.
Ph. D. (Chemistry)	: Awarded (Viva-voce Exam completed at 14.12.2022) Thiagarajar College, Madurai Kamaraj University, Tamilnadu, India.

Research Topics

Ph. D. research title	:Synthesis and characterization of heterogeneous Ti-anchored MCM-41 material for synthetic transformations and electrocatalytic application.
M. Phil. research title	:Synthesis and characterization of cobalt oxide nanoparticles using lemon fruit juice.
M. Sc. research title	:Adsorption and corrosion inhibition behavior of <i>Passiflora foetida</i> leaf extract and 2-amino-5-chlorobenzene thiol in 1M HCl.

Publications

- 1) **S. Muthumanickam**, M. Thennila, P. Muthumareeswaran, K. A. P. Lingam, K. Selvakumar, **Controlled and diastereoselective synthesis of α -(3-hydroxy-2-oxoindolin-3-yl)- β -aminopropanoates**, *Tetrahedron*. 2020, 76, 130238.
- 2) **S. Muthumanickam**, M. Thennila, M. Sathiya, K. Selvakumar, **A reusable and heterogeneous Ti(IV) anchored MCM-41 catalyzed hydroacylation and hydroamination reactions**, *Polyhedron*. 2021, 206, 115355.
- 3) **S. Muthumanickam**, M. Thennila, P. yuvaraj, K. A. P. Lingam, **An Efficient Synthesis of Heterogeneous and Hard Bound Ti^{IV}-MCM-41 Catalyzed Mannich Bases and π -Conjugated Imines**, *Chem Select*. 2021, 48, 14071.

- 4) **S. Muthumanickam**, M. Thennila, P. Muthumareeswaran, K. Selvakumar, **Synthesis and electro-catalytic evaluation of Ti(IV)-anchored heterogeneous mesoporous material for uric acid analysis**, *Microchem. J.* 2021, 170, 106672.
- 5) **S. Muthumanickam**, M. Thennila, P. Muthumareeswaran, M. Sivabharathy, M. Sundararajan, A. Peer Mohammed, S. Pitchaimuthu, K. Selvakumar, **Carbon Ratio Controlled *in-situ* Synthesis of Ordered Mesoporous Hybrid Silica/Carbon Materials via Soft Template Method**, *Silicon*, 2021.
- 6) **S. Muthumanickam**, B. Jeyaprabha, R. Karthik, A. Elangovan, P. Prakash, **Adsorption and corrosion inhibiting behavior of Passiflora foetida leaf extract on mild steel corrosion**, *Int. J. Corros. Scale. Inhib.* 2015, 4, 365.
- 7) M. Thennila, **S. Muthumanickam**, M. Siva Bharathy, P. Muthumareeswaran, K. Selvakumar, **Fabrication of hard bound mesoporous silica stabilized Cu(I) electrocatalyst for 4-nitrophenol sensor via alcothermal strategy**, *J. Electroanal. Chem.* 2020, 859, 113792.
- 8) M. Thennila, **S. Muthumanickam**, M. Siva Bharathy, P. Yuvaraj, K. Selvakumar, **Heterogeneous Cu(I)-SBA-15 Mediated Catalytic Reduction of Substituted Nitroarenes**, *Chem Select.* 2020, 38, 11843.
- 9) S. Perumal, **S. Muthumanickam**, A. Elangovan, R. Karthik, R. Sayee Kannan, K. K. Mothilal, **Bauhinia tomentosa Leaves Extract as Green Corrosion Inhibitor for Mild Steel in 1M HCl Medium**, *J. Bio-Tribo. Corros.* 2017, 3, 13.
- 10) S. Perumal, **S. Muthumanickam**, A. Elangovan, N. Muniyappan, R. Sayee Kannan, K. K. Mothilal, **Green loom to corrosion inhibition of mild steel in acid media by the extract of leucas aspera leaves**, *European. J. Biomed. Pharm. Sci.* 2017, 4, 795.
- 11) S. Perumal, **S. Muthumanickam**, A. Elangovan, R. Sayee Kannan, K. K. Mothilal, **Inhibitive effect of Bauhinia tomentosa leaf extract on acid corrosion of mild steel**, *Int. J. Chemtech Res.* 2017, 10, 203.
- 12) P. R. Sivakumar, A. P. Srikanth, **S. Muthumanickam**, **The Corrosion Inhibition and Adsorption Properties of Eco Friendly Green Inhibitor – A Comparative Study**, *Int. J. Chemtech Res.* 2017, 10, 386.
- 13) S. Perumal, R. Sayee Kannan, **S. Muthumanickam**, A. Elangovan, N. Muniyappan, **Adsorption and corrosion inhibiting behavior of Passiflora foetida leaf extract on mild steel corrosion**, *Asian. J. Chem.* 2018, 11, 253.

- 14) S. Perumal, R. Sayee kannan, **S. Muthumanickam**, A. Elangovan, N. Muniyappan, K. K. Mothil, **Inhibition of mild steel corrosion in 1N HCl and 1N H₂SO₄ by leaves extract of *Gossypium herbaceum***, *J. Adv. Sci. Res.* 2022, 13, 151.
 - 15) S. Perumal, S. Muthumanickam, A. Elangovan, N. Muniyappan, R. Sayee Kannan, K. Krishnamoorth, **Adsorption and Corrosion Inhibiting Behavior of *Black Vitex Nigundo* leaf Extract on Mild Steel Corrosion on 1N HCl and 1N H₂SO₄**, *Lett. Appl. NanoBioScience.* 2024, 13, 12.
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Programmes organized

- 1) **An invited talk** was organized on “**Nanostructured Materials: Synthesis, Properties and Applications**” at 5th January, 2023.
 - 2) **A National Webinar** was organized on “**Environmental Remediation**” at 28th February, 2023 for celebration of **National Science Day**.
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Conference attended

- 1) Presented a paper entitled “**Corrosion inhibiting study on malanonitrile in 1M HCl**”, in the Two days International Conference on Functional Materials (ICFM 2017) held on 07 and 08th September 2017 at Thiagarajar College, Madurai.
- 2) Presented a paper entitled “**Steric Controlled Stereoselective Synthesis of Oxindole Appended γ -Hydroxy- β -Aminoester via Aza-Michael Addition**”, in the 22nd CRSI National Symposium held on 2-4th, 2018 at Pt. Ravishankar Shukla University, Raipur, Chattisgarh.
- 3) Presented a paper entitled “**One pot three component synthesis of β -amino carbonyl derivatives via Mannich reaction using Ti-anchoring MCM-41 as catalyst**”, in the International Conference on Research Initiatives in Chemistry for Sustainable Development (RICS-2019) held on 18-19 March, 2019 at Gandhigram Rural Institute, Gandhigram, Dindugul.
- 4) **Best Poster Award** for the poster presentation in the International Conference on Recent Advances in Materials for Energy and Environmental Remediation (RAMEER-2018), entitled “**Preparation of new class of Silica-Carbon Isomorphs ordered ordered mesoporous materials via soft template direct carbon loading method**”, held on 28-29 June 2018 at V.H.N.S.N. College, Virudhunagar.

- 5) **Best Poster Award** for the poster presentation in the National Conference on Current Innovation of Chemistry to Solve Social and Industrial Problems, entitled “**Selective and sensitive electrochemical detection of uric acid using Ti-MCM-41 modified carbon electrode**”, held on 21st February, 2020 at Saiva Bhanu Kshatriya College, Aruppukottai.
- 6) Participated in the Presented a paper entitled “ **A reusable and heterogeneous Ti(IV) anchored MCM-41 catalyzed hydroacylation and hydroamination reactions**”, in the Two Day International Virtual Conference on Advanced Material for Emerging Technologies (ICAMET-21), held on 26-27 April, 2021 at Sri Ramakrishna Mission Vidhyalaya College for Arts and Science, Coimbatore.
- 7) Participated in the Presented a paper entitled “ **A Theoretical Attempt to Predict Corrosion Inhibition Efficiency of Isatin and Its Derivatives by DFT Calculations**”, in the Two Day International Conference On Multidisciplinary Aspects In Chemistry (ICMAC – 2023), held on 9-10 February, 2023 at Sri Ramakrishna Mission Vidhyalaya College for Arts and Science, Coimbatore.
- 8) Participated in the One Day International Conference (online mode) On Functional Nanomaterials and Nanodevices (ICFNN 2023) held on 26th September, 2023 at Chettinad Academy of Research and Education, Kelambakkam, Chennai.

Workshop and Faculty Development Program (FDP) attended

- 1) Participated the National workshop on “**Catalysis in Organic transformation**” held on October 20 – 21, 2016 at Bharathidasan university, Thiruchirapalli.
- 2) Participated in the workshop on “**Intellectual Property Rights and Innovation**” held on March 14, **2017** at Thiagarajar College, Madurai.
- 3) Participated the “**National Virtual Workshop on Computational Biology and Chemistry tools for Drug Designing**” held on 03 to 06 Oct, **2020** at Thiagarajar College, Madurai.
- 4) Participated the “**Technical Tamil Workshop on Writing Tamil Technical and Scientific Engineering Techniques in Tamil**” held on 09, 10 February **2023** at Anna University Regional Campus, Madurai.
- 5) Participated the ICT Academy organised “**Two Day Faculty Development Program on Design Thinking**” held on November 22 and 23, 2023 at Mannar Thirumalai Naicker College, Madurai.

- 6) Participated in a “Seven-Day International Virtual Faculty Development Programme On Emerging Trends In Chemical Sciences (ETCS-2023)” organised by the PG & Research Department of Chemistry, Seethalakshmi Ramaswami College, Tiruchirappalli from 19th to 25th November 2023.

Webinar Conference attended

- 1) Participated in the “**Webinar on Lecture Series on Spectroscopy and its Perspective**” held on 5th June, **2020** at Sacred Heart College, Tirupattur.
 - 2) Participated in the “**Webinar on NANO - THE TINY WARRIOR- Engineering Nanomedicine and Drug Delivery System**” held on 30th May, **2020** at Kongu Engineering College, Erode.
 - 3) Participated in the “**Webinar on Assembled Advanced Organic Materials**” held on 3rd June, **2020** at National College, Trichy.
 - 4) Participated in the “**Fluorescent Inorganic Nanoparticle for Optical Sensing and Energy applications**” held on 13th July, **2020** at Lathamathavan Arts and Science College, Madurai.
 - 5) Participated in the “**Webinar on Advances in Crystal Growth and Nano Materials**” held on 18th June, **2020** at Kamraj College, Thoothukudi.
 - 6) Participated in the “**Webinar on Cyclic and Linear Sweep Voltammetry- Fundamentals & Applications**” 31st May, **2020** at Bhaktavatsalam Memorial College for Women, Chennai.
 - 7) Participated in the “**International live Webinar on Synthesis of Biologically active compounds based on Nitrogen heterosystem**” held on 23rd May, **2020** at Annai College of Arts and Science, Tiruchirappalli.
 - 8) Participated the “**Using Tools to Prevent Plagiarism in Higher Education**” held on 30th July, **2021** organised by K. J. Somaiya College of Science and Commerce, Mumbai in collaboration with Turnitin.
 - 9) Participated in the “**International webinar on Recent Advances in Material Sciences – RAMS – 2K21**” held on 27th August, **2021** at Sri S. Ramasamy Naidu Memorial College, Sattur.
 - 10) Participated in the “**National Seminar on Research & IPR For Sustainable Development**” conducted by Fatima College, Madurai on 15th February 2023.
 - 11) Participated in the “**National Seminar on Smart Materials and its Applications**” conducted by Department of Chemistry, Sethu Institute of Technology held on 29th December 2023.
 - 12) Participated in the “**One day International webinar on Nano Materials for Energy and Environmental Applications**” organised by school of Engineering, Monash University, Malaysia held on 20th December 2023.
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Personal Details

Name : Muthumanickam Shenbagapushpam
Father Name : Shenbagapushpam
Sex : Male
Date of birth : 11.11.1992
Nationality : Indian
Marital status : Married
Languages Known : English and Tamil
Permanent Address : 35/16 Meyyappan 3rd Street, Gnanaolivu puram, Madurai-625016.
Mobile No : 9047072861

DECLARATION

I hereby declare that the above information is factually correct to the best of my Knowledge and belief.

Date : 08/01/2024

Place : Madurai.



(Muthumanickam Shenbagapushpam)