

Pachaiyappa's College, Chennai
Department of Chemistry
EVR Periyar High Road
Chennai, Tamil Nadu, Tamilnadu 600 030
India

E mail: sivaatnus@gmail.com
Phone: [044-26864984]
Mobile: [91-9444316582]
Fax: [fax]

Website: <http://pachaiyappascollege.edu.in/node/124?depart=8>

Vajiravelu Sivamurugan, Ph. D, FICS FSPP

https://www.researchgate.net/profile/Vajiravelu_Sivamurugan

Education

- Jun 2001 – Mar 2005* **Anna University, Chennai**
Doctor of Philosophy, Multi-component synthesis of heterocycles using
Zn[(L)Proline]₂ complex
Chennai, India
- Jun 2000 – May 2001* **Anna University, Chennai**
Master of Philosophy, Chemistry (Polymer)
Chennai, India
- Jun 1998 – Apr 2000* **Ramakrishna Mission Vivekananda College (University of Madras)**
Master of Science, Chemistry
Mylapore, Chennai, India
- Jun 1995 – Apr 1998* **Arignar Anna Govt Arts college (University of Madras)**
Bachelor of Science, Chemistry
Cheyyar, Tamil Nadu, India

Thesis

Research Experience

- Jan 2014 – present* **Assistant Professor**
Pachaiyappas College, Chennai,
Chennai, India

Research in Solid waste managment especially polymer wastes using
heterogeneous catalysts
Natural product isolation and structure elucidation
Organic synthesis of heterogenous catalysts
- Aug 2009 – Jan 2014* **Research Scientist**
DyStar Singapore te Ltd, Research and Development
Singapore, Singapore

Worked in acid dyes for wool and polyamides, reactive black for wool and
washable dyes for polyesters
- Sep 2005 – Jul 2009* **Research Fellow**
National University of Singapore, Department of Chemistry
Singapore, Singapore

Worked in organic molecular materials especially in perylene diimide based

electron transporting materials

Jun 2001 – Aug 2005

Research scholar

Anna University, Chennai, Department of Chemistry
Chennai, India

Developed Zn[(L)Proline]₂ catalysts for multi-component heterocycles synthesis under solven-free and aqueous medium

Statistics

RG Score 27.5

h-index 12

i10-index 12

Publications 70

Reads 12,068

Google Scholar Citations 998

Awards & Grants

Dec 2018 Fellow Society of Pharmacognosy and Phytochemistry (FSPP).

Nov 2017 Award: Outstanding Scientist (Venus International Research Foundation)

July 2017 Fellow of Indian Chemical Society (FICS)

Mar 2003 Scholarship: Senior Research Fellowship (CSIR)

Skills & Activities

Skills Catalysis, Reagents, Synthetic Organic Chemistry, Catalyst, Absorption, Organic Chemistry, Organic Dyes, Textile Chemistry, textile dyes, Catalyst Design, Environmental Chemistry, Material Characterization, Nanomaterials, Heterogeneous Catalysis, Green Chemistry, Organic Process Development, Synthesis, Organic Synthesis, Materials Chemistry, Homogeneous Catalysis, Biofuels, Organic Compounds, ¹H-NMR, Organometallics, Gold Nanoparticles, Nanoparticles, Heterocyclic Chemistry, Cross Coupling, Organic Chemistry Synthesis, Heterocyclic Compounds Synthesis, Dyes, Synthetic Chemistry, Fine Chemicals, Asymmetric Synthesis, Multistep Synthesis, Chemical Synthesis, Chirality, Asymmetric Catalysis, Medicinal and Pharmaceutical Chemistry, Shimadzu, Derivatives, Spectrophotometer, Acids, Fluorescence, Column Chromatography, Low Density Lipoproteins, High Density Lipoproteins (HDL), Phospholipids, Matrix, Photovoltaics, Methanolic Extract, Solvents, Fluorochromes, Methanol

Languages Basic German, English, Tamil

Scientific Memberships ACS
MRS

MRS-S
Fellow of Indian Chemical Society (FICS)
Fellow Member, Society of Pharmacognosy and Phytochemistry (FSPP).

Interests Languages, Music, Reading, History and Jogging

Publication Highlights

[authors]: [title]. [details]

Books

V Sivamurugan, S Murugesan, N Shanti, Priya Ponmudi: *BIOSYNTHESISED NANO MATERIALS AS NANOMEDICINE*. 07/2018; JPS Scientific Publications, Tamil Nadu, India., ISBN: 978-81-935636-6-3

Book Chapters

Vajiravelu Sivamurugan, Priya Ponmudi: *The Performance of Microbial Fuel Cells (MFCs) in the Field Trials from the Global Perspectives (Chapter 13)*. Microbial Fuel Cell Technology for Bioelectricity, 08/2018; Springer International Publishing AG, part of Springer Nature 2018., ISBN: 978-3-319-92904-0, DOI:10.1007/978-3-319-92904-0_13

Journal Publications

Vajiravelu Sivamurugan, Priya Ponmudi: *In vitro studies on the effect of methanolic extract of Elytraria acaulis on the glucose metabolism of Cotylophoron cotylophorum*. International Journal of Green Pharmacy 11/2018; 12(3):S688., DOI:10.22377/ijgp.v12i03.2040

Pandithurai M, Murugesan S, Sivamurugan V: *Investigation on in vivo analgesic activity of methanol extract of marine brown alga spatoglossum asperum j. Agarth*. Asian Journal of Pharmaceutical and Clinical Research 11/2018; 11(11):313., DOI:10.22159/ajpcr.2018.v11i11.27760

Priya, Kotteswari, N. Shanthi, Subbiah Murugesan, Vajiravelu Sivamurugan: *ANTIBACTERIAL ACTIVITY OF MARINE RED ALGA GRATELOUPIA LITHOPHILA BOERGESEN*. International Journal of Pharmacy and Biological Sciences 07/2018; 8(3):1125-1129.

Vajiravelu Sivamurugan, RamyaDevi. K. C, Lakshmi Sundaram. R, Asha D, Vidya Vasudevan, Mary Elizabeth Gnanambal. Krishnan: *Demonstration of bioprocess factors optimization for enhanced mono-rhamnolipid production by a marine Pseudomonas guguanensis*. International Journal of Biological Macromolecules 12/2017; 108., DOI:10.1016/j.ijbiomac.2017.10.186

Subbiah Murugesan, Sundaresan Bhuvaneswari, Vajiravelu Sivamurugan: *In vivo antidiabetic efficacy of red algae Portieria hornemannii and Spyridia fusiformis methanol extract on alloxan stimulated hyperglycemic activity in Wistar albino rats*.

Vishnu Kiran M, Murugesan S, vajiravelu sivamurugan: *Investigation of Biosynthesized Silver Nano Particles Interaction From Halymenia Porphyroides With The E7 Protein Using Bioinformatics Tool*. DOI:10.26717/BJSTR.2017.01.000359

- Vajiravelu Sivamurugan, Gopal Jeya, Hamid Ilbeygi, Deepika Radhakrishnan: *Glycolysis of Post-Consumer Poly(ethylene terephthalate) Wastes Using Al, Fe and Zn Exchanged Kaolin Catalysts with Lewis Acidity*. 06/2017; 5(2):128-136., DOI:10.1166/apm.2017.1141
- Subbiah Murugesan, Sundaresan Bhuvaneswari, Vajiravelu Sivamurugan: *GREEN SYNTHESIS, CHARACTERIZATION OF SILVER NANOPARTICLES OF A MARINE RED ALGA SPYRIDIA FUSIFORMIS AND THEIR ANTIBACTERIAL ACTIVITY*. International Journal of Pharmacy and Pharmaceutical Sciences 05/2017; 9(5):192., DOI:10.22159/ijpps.2017v9i5.17105
- Vajiravelu Sivamurugan, Mohanapriya P, Murugesan S: *In Vitro Free Radical Scavenging Activity of Tolypiocladia Glomerulata (C.Agardh) F.Schmitz*.
- Subbiah Murugesan, Sundaresan Bhuvaneswari, U.S. Mahadeva Rao, Vajiravelu Sivamurugan: *Screening of Phytochemicals and Antibacterial Activity of Marine Red Alga Portieria hornemannii (Lyngbye) P. C. Silva*. 01/2017; 9(3):131., DOI:10.5958/2321-5836.2017.00022.2
- Sathyaseelan Thennarasan, Subbiah Murugesan, Vajiravelu Sivamurugan: *Antidiabetic efficacy of Methanol extract Brown Alga Lobophora variegata on Alloxan stimulated Hyperglycemic Wistar Albino Rats*. 01/2017; 7(3):157., DOI:10.5958/2231-5713.2017.00026.5
- Sathyaseelan Thennarasan, Subbiah Murugesan, Vajiravelu Sivamurugan: *Hepatoprotective activity of brown alga Lobophora variegata against chromium induced oxidative damage in wistar rats*. 01/2017; 9(2):61., DOI:10.5958/2321-5836.2017.00011.8
- Vajiravelu Sivamurugan, Murugesan Subbiah, Bhuvaneswari Sundaresan, Thamizh Selvam Natarajan: *In vitro cytotoxic studies of red algae Portieria hornemannii and Spyridia fusiformis against Dalton's lymphoma ascite and Ehrlich ascite carcinoma cell lines*. DOI:10.12980/jclm.4.2016J6-208
- Vajiravelu Sivamurugan, Murugesan S, Bhuvaneswari S: *Phytochemical screening and HPTLC fingerprint profile of marine red alga Spyridia fusiformis Boergesen*. DOI:10.21276/haya.2016.1.4.2
- Vajiravelu Sivamurugan, Subbiah Murugesan, Sundaresan Bhuvaneswari: *In vivo antidiabetic efficacy of red algae Portieria hornemannii and Spyridia fusiformis methanol extract on alloxan stimulated hyperglycemic activity in Wistar albino rats*. DOI:10.21276/sjmps.2016.2.10.3
- Vajiravelu Sivamurugan, Mohanapriya N, Murugesan S: *In Vitro α -Amylase and α -Glucosidase Inhibitory Activity of Methanol Extract of Tolypiocladia glomerulata (C. Agardh) F. Schmitz*. DOI:10.21276/sjbr.2016.1.3.1
- Murugesan Subbiah, Bhuvaneswari Sundaresan, Kalandar Ameer, vajiravelu sivamurugan: *Hepatoprotective efficiency of methanol extract of red algae against chromium-induced oxidative damage in Wistar rats*. 07/2016; 4(7):541-546., DOI:10.12980/jclm.4.2016J6-78
- Vajiravelu Sivamurugan, murugesan.S: *Evaluation of in vitro antidiabetic activity of red seaweed Portieria hornemannii (Lyngbye) (Silva) and Spyridia fusiformis (Wulfen)*. World Journal of Pharmaceutical Sciences 06/2016; 4(6):415.
- Vajiravelu Sivamurugan, Chidambaranathan. N, Thennarasan. S, Subbiah Murugesan: *Analgesic, Anti-inflammatory and Antipyretic Activity of the Methanol Extracts of Brown Alga Lobophora variegata (J.V.Lamouroux) Womersley ex E.C.Oliveir*.
- Vajiravelu Sivamurugan, M Pandithurai, S Murugesan, R Lakshmisundram: *Chromatographic Fingerprint Analysis of Spatoglossum asperum J.Agardh by HPTLC Technique*. DOI:10.7726/ajmc.2015.1002
- Vajiravelu Sivamurugan, Murugesan Subbiah, Pandithurai M, ThamizhSelvan N: *Antifungal activity of various solvent extracts of marine brown alga Spatoglossum asperum*. DOI:10.7439/ijpc.v5i8.2370

- Vajiravelu Sivamurugan, S. Murugesan, P. Murugakoothan, S. Bhuvaneswari, N. Shanthi: *Red alga Hypnea musciformis* (Wulf) Lamour mediated environmentally benign synthesis and antifungal activity of gold nano particles.
- Vajiravelu Sivamurugan, S. Murugesan, Thennarasu.S: *Antibacterial activity of various solvent extracts of marine brown alga Spatoglossum asperum*. 06/2015; 5(6):133-138., DOI:10.7439/ijpr.v5i6.2112
- Vajiravelu Sivamurugan, Thennarasu, S. Murugesan: *Green synthesis of silver nano particles using marine brown alga lobophora variegata and its efficacy in antifungal activity*. World Journal of Pharmaceutical Research 01/2015; 4(6):2137-2145.
- Vajiravelu Sivamurugan, S. Murugesan, Thennarasu.s: *Strutural Identification and Antioxidant Properties of methanolic extract of brown alga Lobophora variegata* (J.V. Lamouroux) Womersley ex E.C. Oliveir..
- Yoshikazu Ito, Kazuyuki Takai, Akira Miyazaki, Vajiravelu Sivamurugan, Manabu Kiguchi, Yoshihiro Ogawa, Naotake Nakamura, Suresh Valiyaveetil, Tomofumi Tada, Satoshi Watanabe, Toshiaki Enoki: *Anomalous metallic-like transport of Co-Pd ferromagnetic nanoparticles cross-linked with π -conjugated molecules having a rotational degree of freedom*. Physical Chemistry Chemical Physics 11/2013; 16(1)., DOI:10.1039/c3cp53689k
- Yoshikazu Ito, Akira Miyazaki, Kazuyuki Takai, Vajiravelu Sivamurugan, Takashi Maeno, Takeshi Kadono, Masaaki Kitano, Yoshihiro Ogawa, Naotake Nakamura, Michikazu Hara, Suresh Valiyaveetil, Toshiaki Enoki: *Magnetic Sponge Prepared with an Alkanedithiol-Bridged Network of Nanomagnets*. Journal of the American Chemical Society 08/2011; 133(30):11470-3., DOI:10.1021/ja204617a
- V. Sivamurugan, K. Deepa, M. Palanichamy, V. Murugesan: *[(L)Proline]₂Zn Catalysed Synthesis of 1,5-Benzodiazepine Derivatives Under Solvent-Free Condition*. Synthetic Communications 01/2011; 34(21):3833-3846., DOI:10.1081/SCC-200034752
- A Miasojedovas, K. Kazlauskas, G. Armonaitė, V. Sivamurugan, S. Valiyaveetil, J.V. Grazulevicius, S. Jursenas: *Concentration effects on emission of bay-substituted perylene diimide derivatives in a polymer matrix*. Dyes and Pigments 01/2011; 92(3)., DOI:10.1016/j.dyepig.2011.09.017
- V Sivamurugan, K Kazlauskas, S Jursenas, A Gruodis, J Simokaitiene, J V Grazulevicius, S Valiyaveetil: *Synthesis and Photophysical Properties of Glass-Forming Bay-Substituted Perylene diimide Derivatives*. The Journal of Physical Chemistry B 02/2010; 114(5):1782-9., DOI:10.1021/jp907697f
- Sivamurugan Vajiravelu, Soumyajit Ghosh, Suresh Valiyaveetil: *Cross Linking of Gold Nanoparticles with Hexa-peri-hexabenzocoronene Derivatives*. Journal of Nanoscience and Nanotechnology 11/2009; 9(11):6587-93., DOI:10.1166/jnn.2009.1342
- Sivamurugan Vajiravelu, Lygaitis Ramunas, Gra Zulevičius, Juozas Vidas, Gaidelis Valentas, Jankauskas Vygtas, Suresh Valiyaveetil: *Effect of substituents on the electron transport properties of bay substituted perylene diimide derivatives*. Journal of Materials Chemistry 01/2009; 19(24):4268., DOI:10.1039/b901847f
- Vajiravelu Sivamurugan: *BIFC and QFC Promoted Rapid and Cleaner Aromatization of 1,4-Dihydropyridines under Solvent-Free Condition*. ChemInform 11/2007; 38(48)., DOI:10.1002/chin.200748128
- Vajiravelu Sivamurugan, Velayutham Murugesan, Valiyaveetil Suresh, Muthaiyahpillai Palanichamy, Ajayan Vinu: *BIFC and QFC Promoted Rapid and Cleaner Aromatization of 1,4-Dihydropyridines under Solvent-Free Condition*. Journal of Heterocyclic Chemistry 07/2007; 44(4):973 - 977., DOI:10.1002/jhet.5570440438

- S. Anandan, A. Vinu, K. L. P. Sheeja Lovely, N. Gokulakrishnan, P. Srinivasu, T. Mori, V. Murugesan, V. V. Sivamurugan, K. Ariga: *Photocatalytic Activity of La-Doped ZnO for the Degradation of Monocrotophos in Aqueous Suspension*. Journal of Molecular Catalysis A Chemical 04/2007; 266(1):149-157., DOI:10.1016/j.molcata.2006.11.008
- V. Sivamurugan, A. Vinu, M. Palanichamy, V. Murugesan: *Rapid and Cleaner Synthesis of 1,4-Dihydropyridines in Aqueous Medium*. ChemInform 09/2006; 37(38), DOI:10.1002/chin.200638133
- Vajiravelu Sivamurugan, M. Palanichamy, V. Murugesan, A. Vinu: *Rapid and cleaner synthesis of 1,4-dihydropyridines in aqueous medium*. Heteroatom Chemistry 05/2006; 17(4):267-271., DOI:10.1002/hc.20197
- A. Vinu, K. Z. Hossain, G. Satish Kumar, V. Sivamurugan, K. Ariga: *Adsorption of amino acid on mesoporous molecular sieves*. Studies in surface science and catalysis 12/2005; 156:631-636., DOI:10.1016/S0167-2991(05)80266-6
- Ajayan Vinu, Masahiko Miyahara, Vajiravelu Sivamurugan, Toshiyuki Mori, Katsuhiko Ariga: *Large pore cage type mesoporous carbon, carbon nanocage: A superior adsorbent for biomaterials*. Journal of Materials Chemistry 12/2005; 15(48), DOI:10.1039/b507456h
- V. R. Sivamurugan, R. Suresh Kumar, M. Palanichamy, V. Murugesan: *Synthesis of Hantzsch 1,4-Dihydropyridines under Solvent-Free Conditions Using Zn[(L)proline]₂ as Lewis Acid Catalyst..* Journal of Heterocyclic Chemistry 12/2005; 42(5):969 - 974., DOI:10.1002/jhet.5570420534
- Vajiravelu Sivamurugan: *Synthesis of Hantzsch 1,4-Dihydropyridines under Solvent-Free Conditions Using Zn[(L)proline]₂ as Lewis Acid Catalyst..* ChemInform 11/2005; 36(49), DOI:10.1002/chin.200549128
- V Sivamurugan, G Abraham Rajkumar, Banumathi Arabindoo, V Murugesan: *Selective and Clean Oxidation of Alcohols with Benzimidazolium Fluorochromate (BIFC) under Solvent Free Conditions*. Indian Journal of Chemistry Section B 05/2005; 44(18):144-147.
- V. Sivamurugan, K. Deepa, M. Palanichamy, V. Murugesan: *[(L)Proline]₂Zn Catalyzed Synthesis of 1,5-Benzodiazepine Derivatives under Solvent-Free Condition*. ChemInform 03/2005; 36(10), DOI:10.1002/chin.200510167
- Vajiravelu Sivamurugan: *Selective and Clean Oxidation of Alcohols with Benzimidazolium Fluorochromate (BIFC) under Solvent Free Conditions..* ChemInform 01/2005; 36(18), DOI:10.1002/chin.200518041
- G Abraham Rajkumar, V Sivamurugan, Banumathi Arabindoo, V Murugesan: *Mild and Selective Oxidation of Alcohols and Deoxygenation of Oximes over Supported Quinolinium Fluorochromate..* Indian Journal of Chemistry Section B 09/2004; 43(36), DOI:10.1002/chin.200436037

Patents

- sivamurugan Vajiravelu, Roxana Barbieru, Loh Wei Tian: *List of Patents published by me from DyStar Singapor Pte Ltd. Especially on Acid dyes and Reactive dyes, process for the production thereof and their use*. Year: 04/2015
- Vajiravelu Sivamurugan, Barbieru, Roxana Loh, Wei Tian: *Metal free acid dyes, process for the production thereof and their use*. Ref. No: EP 2868713 A1, Year: 01/2015
- Vajiravelu Sivamurugan: *Metal-free acid dyes for dyeing and printing*. Ref. No: EP 2868715 A1, Year: 01/2015
- Vajiravelu Sivamurugan: *Acid dyes, process for the production thereof and their use..* Ref. No: WO 2015062932 A1, Year: 01/2015

Vajiravelu Sivamurugan: *Acid dyes, process for the production thereof and their use*. Ref. No: WO 2015062929 A1, Year: 01/2015

Vajiravelu Sivamurugan, Roxana Barbieru, Wei Tian. Loh: *Acid dyes, process for the production thereof and their use*. Ref. No: WO 2015062930 A1, Year: 01/2015

BARBIERU ROXANA [SG, SIVAMURUGAN VAJIRAVELU [SG, YUAN HAN [SG, KIM HYEONG KYU [SG, RAVI VEDARETHINAM [SG] +: *REACTIVE DYES, PROCESS FOR THE PRODUCTION THEREOF AND THEIR USE*. Ref. No: WO2013189813 (A1), Year: 12/2013

Vajiravelu Sivamurugan, Barbieru Roxana: *REACTIVE DYES AND THEIR METAL COMPLEXES, PROCESS FOR THE PRODUCTION THEREOF AND THEIR USE*. Ref. No: WO2013189816 (A1), Year: 12/2013

Barbieru Roxana, Vajiravelu Sivamurugan: *METAL FREE ACID DYES, METHODS FOR THE PRODUCTION THEREOF AND THEIR USE*. BARBIERU, Roxana; (SG).SIVAMURUGAN, Vajiravelu; (SG). WO2012072210. Ref. No: WO2012072210, Year: 06/2012

Conference Proceedings

Vajiravelu Sivamurugan, Subbiah Murugesan: *Biomedical applications of gold and silver nanoparticles synthesized from marine algae*. International Conference on advances in Algal Biotechnology, Vellore Institute of Technology (VIT); 08/2016

Sivamurugan Vajiravelu, Suresh Valiyaveetil: *Synthesis and Optical properties of Perylene Bisimide Incorporated Low Bandgap Polymers for Photovoltaics*. materials research society; 04/2009, DOI:10.1557/PROC-1154-B05-87

Vajiravelu Sivamurugan, Ganapathy Balaji, Valiyaveetil Suresh: *INTERACTION OF CARBAZOLE SUBSTITUTED UNSYMMETRICAL CORONENE OLIGOMERS WITH PERYLENE BISIMIDE MOLECULES*. Polymer Preprints; 05/2008

Ganapathy Balaji, Vajiravelu Sivamurugan, Suresh Valiyaveetil: *LIGHT EMITTING CONJUGATED POLYMERS INCORPORATING THIOPHENE-PHENYLENE MONOMERS*. Polymer Preprints; 01/2008

Vajiravelu Sivamurugan, Suresh Valiyaveetil: *SYNTHESIS AND CHARACTERISATION OF CARBAZOLE CONTAINING UNSYMMETRICAL BENZOPERYLENES*. Polymer Preprints; 01/2007, DOI:10.13140/2.1.3828.2248

Vajiravelu Sivamurugan, Subbiah Jegadesan, Valiyaveetil Suresh: *CARBAZOLE SUBSTITUTED UNSYMMETRICAL HEXA-PERI- HEXABENZOCORONENES: SYNTHESIS, OPTICAL PROPERTIES AND SELF-ASSEMBLY*. Polymer Preprints; 01/2007

Vajiravelu Sivamurugan, Suresh Valiyaveetil: *SYNTHESIS AND OPTICAL PROPERTIES OF UNSYMMETRICAL BENZOPERYLENES*. PMSE Preprints; 01/2007

Technical Reports