
Curriculum Vitae

Dr. P. MOSAE SELVAKUMAR

ASSISTANT PROFESSOR OF CHEMISTRY

SCIENCE AND MATH PROGRAM,

ASIAN UNIVERSITY FOR WOMEN, CHITTAGONG, BANGLADESH

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http://scholar.google.com/citations?user=j_V2TMIAAAAJ&hl=en



MY PASSION: Learning, teaching and doing science towards achieving sustainable development, understanding the hidden secrets of nature and conservation of the same.

ACADEMIC PROFILE

Ph.D in Chemistry

Bhavnagar University/ Central Salt & Marine Chemicals Research Institute (CSIR), Gujarat, India

Title: Studies on Supramolecular Helical Compounds: Synthesis, Structural Investigation and Functional Application.

***Qualified Tamilnadu state Eligibility test (TNSET) for Lecturership conducted by University grant Commission, India**

M. Sc, M.Phil in Psychology, Tamilnadu Open University, Chennai, Tamilnadu,

B. Sc, M. Sc in Chemistry

Manonmaniam sundaranar university, Tamilnadu, India.

D.T Ed in Education

Government Teacher Training Institute (NCERT), Tirunelveli, Tamilnadu.

AWARDS RECEIVED

- **Alumni Achiever Award** from Sriparamakalyani college for the academic Year 2014-2015
- **Achiever Award** from Karunya University for the academic Year 2013-2014
- **DST Fast Track Young Scientist Award** (INR 24.56 lakhs) from Department and Science and Technology, Government of India (SB/FT/CS-068-2013).
- **DAAD Fellowship** from German Academic Exchange Service and visited Technical University, Kaiserslautern, Germany, 2010
- **Young Scientist Award** at National Conference Environ Nano2010, conducted by Manonmaniam Sundaranar University and SPKCES.
- **Senior Research Fellowship** from the Council of Scientific and Industrial Research (CSIR), Government of India.
- Second prize in intercollege level **ChemPuzzle** and **ChemQuiz** conducted by VHSN College, Viruthunagar, India.
- First prize in **Science Teaching Competition** organized by Government Teacher Training Institute, Tirunelveli, India.

TEACHING RESEARCH/ INDUSTRY EXPERIENCE

- Working as Assistant professor in Science and math program, Asian University for women, Chittagong, Bangladesh from Aug 2019.
- Assistant professor in Department of Chemistry, Karunya University, Coimbatore from Aug 2011 to July 2019.
- Assistant Professor in Saveetha School of Engineering, Saveetha University, Chennai from Feb 2011 to Jul 2011.
- Chemistry Tutor (Middle/secondary/Higher secondary school students-CBSE/state board) for five years in Brilliant Educational Academy, Kadayam.
- CSIR-Senior Research Fellow in Central Salt and Marine Chemicals Research Institute (CSIR), Gujarat
- DAAD Research Fellow with Prof. W.R.Thiel at Department of Chemistry, Technical University, Kaiserslautern, Germany.
- DST-JRF at in Central Salt and Marine Chemicals Research Institute (CSIR), Gujarat.
- Scientist in Chemo-Informatics division of Jubilant Biosys Ltd, Bangalore

RESEARCH & PROJECTS

- Karunya Short Term Research Grant (INR 40,000)for Helicates for Anion Sensing.
- DST-SERB fast track young scientist award Project (INR 24,56,000) entitled "**Design, Synthesis and characterization of novel supramolecular Helicates for their application in molecular recognition**".
- Supervised many B.Tech mini projects, M.Sc Chemistry, M.Sc Nano, M.Tech Nanotechnology dissertations three research scholars for PhD.
- Recognized PhD guide in Karunya University and Bharathithasan University
- Received INR 10,000 (as student project fund) from Tamilnadu State Council for Science and Technology under SPS Scheme.

RESEARCH COLLABORATION

- Central Salt and Marine Chemicals Research Institute (CSIR)&NITTR, India
- Technical University, Kaiserslautern, Germany, King Saud University, Riyadh, Saudi Arabia, National Dong Hwa university, Hualien, Taiwan, National Chung Cheng University, Taiwan

PERSONAL TRAITS

Dynamic and self motivated teacher cum researcher and mentor, Eagerness to help others, solving problems of society using science/nature, Attitude of enjoying the synergy of team work, Following Win-Win policy in professional and personal relationships.

RESEARCH INTERESTS

Synthesis of small bio active molecules and Supramolecular architectures, development of Sensor molecules for anions/cations/ small molecules in Water, **Chem/Bio sensors, Host-guest Chemistry**, DNA binding-Drug delivery using Nano particles-material chemistry, Antibacterial and wound healing molecules, Photo chemistry, Metallo-Supramolecular material chemistry-Helicate, MOF, **flame retardant materials**, Green nano chemistry, IPR, Value Added products from Palmyrah palm for Sustainable development and Social entrepreneurship.

COMPUTER SKILLS FOR CHEMISTRY

MS Office, Chemdraw, Gaussian, Schrodinger packages

COURSES HANDLED

Organic synthetic reagents and concerted Reactions, Organic chemistry, Organic Chemistry lab, Molecular Machines and Materials, Supramolecular Chemistry, Medicinal chemistry, Analytical Chemistry, Inorganic chemistry, Coordination chemistry, Environmental chemistry, General chemistry, Applied Chemistry, chemistry for engineers, Applied chemistry lab, Evolution of materials, Green Chemistry, Chemistry for Engineers, and IPR

TEACHING AND RESEARCH ACCOMPLISHMENTS

- Handled the tasks of planning, developing and using effective teaching materials as well as methods to assist students in meeting their goals
- Reviewed, evaluated and revised *Organic chemistry*, Medicinal chemistry, Supramolecular chemistry, Molecular machines, Analytical chemistry, Inorganic chemistry, Coordination chemistry, Environmental and applied chemistry curriculum and teaching techniques for under graduate and post graduate students through the process of self-evaluation
- Handled the tasks of maintaining high standards of competence in teaching methodologies through professional development activities
- Handled the tasks of delivering scheduled lectures for UG and PG students using various methodologies and analyzing test results.
- Handled many Analytical/spectroscopic instruments such as UV-Visible, Fluorescent, IR, NMR spectroscopy, HPLC, GC, TGA, SEM, PXRD and Single Crystal XRD
- Handled applied and organic chemistry lab for M.Sc students. Responsible for developing syllabus along with course information materials for each course and laboratory
- Handled the tasks of conducting regular General chemistry, organic chemistry, Supramolecular chemistry, Medicinal chemistry, Molecular machines, Coordination chemistry, photo chemistry, Analytical, Environmental, Green chemistry, Engineering chemistry, Applied chemistry lectures and chemical experiments in the classroom as well as in laboratories
- Handled the tasks of monitoring and supervising M.Sc, B Tech, M Tech and Ph D research scholars on supramolecular, organic chemistry and bio nano-chemistry

- Involved in activities like developing various bio active small molecules, nanomaterials(Ag, Au, ZnO, LDH and Fe₂O₃)coordination complexes based receptors-analytical techniques for sensing anions, cations and small molecules in water by internally and externally-funded projects.
- Faculty coordinator for CHEMIKARs-The Karunya Chemistry researchers association and PEPSAK- Pre Engineering programme students association of Karunya.

ADMINISTRATIVE AND COURSE CO-ORDINATION RESPONSIBILITIES

1. STUDENTS ASSOCIATION-FACULTY COORDINATOR

- *Create, communicate meeting schedules for students*
- *Set activities and short-term, long-term milestones*
- *Schedule regular follow-up meetings*
- *Establish innovation teams*
- *Update department research progress on website and communicate to Press*

2. ASSESSMENT AND ACCREDITATION

- *Prepare claims, proofs for assessment*
- *Update department requirements to meet NAAC standards*
- *Co-ordinate design/printing of brochures, placards & posters*
- *Collect, prepare and update the monthly report*
- *Monitor department performance in terms of staff, student achievements*
- *Collate data pertaining to publications, scientific presentations*
- *Co-ordinate preparation of monthly IQAC reports*

3. DOCTORAL COMMITTEE MEMBER FOR PHD STUDENTS

- *Set and help students achieve research targets*
- *Recommend students for national, international research collaborations*
- *Scrutinize research progress of both in- and off-campus research students*

4. MEMBER OF CURRICULUM DEVELOPMENT COMMITTEE

- *Suggest and decide on major curriculum revisions of courses run by the department*
- *Review and revise syllabi to reflect recent trends and industry requirements*
- *Recommend introduction of need-based courses based on feedback from industry experts and alumni*

RESEARCH PAPERS PUBLISHED (SELECTED)

1. G. Tamil Selvan, V.Chitra, R. Tamil Selvan Israel V.M.V. Enoch, **P. Mosae Selvakumar**: On / Off Fluorescent Chemosensor for Selective Detection of Divalent Iron and Copper Ions: Molecular Logic Operation and Protein Binding. *ACS omega*, 2018, 3, 7985-7992.
2. Govindaraj Tamil Selvan, Sumathi Poomalai, Sivaraj Ramasamy, **Paulraj Mosae Selvakumar**, Israel V Muthu Vijayan Enoch, Sara Gracia Lanas, and Andrea Melchior, Differential Metal Ion Sensing by an Antipyrine Derivative in Aqueous and β -Cyclodextrin Media: Selectivity Tuning by β -Cyclodextrin, *Analytical Chemistry*, 90,22,13607-13615, DOI: 10.1021/acs.analchem.8b03810

3. Soundrapandian Suganthi, Ramasamy Sivaraj, **Paulraj Mosae Selvakumar**, Israel VMV Enoch, Supramolecular complex binding to G-quadruplex DNA: Berberine encapsulated by a planar side arm-tethered β -cyclodextrin, *Journal of Biomolecular Structure and Dynamics* 10.1080/07391102.2018.1512420
4. Rahul Kaushik, Rahul Sakla, Amrita Ghosh, G Tamil Selvan, **P Mosae Selvakumar**, D Amilan Jose, Selective Detection of H₂S by Copper Complex Embedded in Vesicles through Metal Indicator Displacement Approach, *ACS Sens.*, **2018**, 3 (6), pp 1142–1148
5. V.Chitra, **P. Mosae Selvakumar**, G. Tamil Selvan, Israel V.M.V. Enoch, V. Srinivasadesikan, Shyi-Long Lee, The first highly selective turn “ON” fluorescent sensor for vanadyl (VO₂⁺) ion: DFT studies and Molecular logic gate behavior, *New Journal of Chemistry* (2018), 42 (5), 3833-3839, 10.1039/C7NJ04434HG
6. Tamil Selvan, V.Chitra, Israel V.M.V. Enoch, **P. Mosae Selvakumar**: Development of a fluorescent chemosensor towards sensing and separation of Mg²⁺ ions in chlorophyll and hard water. *New Journal of Chemistry* (2018). 42, 902 - 909, 10.1039/C7NJ03888G.
7. R Vettumperumal, S Kalyanaraman, G Selvan, **P Mosae Selvakumar**, Fluorescence analysis of natural dyes from *Plumeria rubra* (red and white) flowers, *Optik*, 2018, 159, 108-114
8. Poomalai S, Govindaraj TS, Soundrapandian S, **P.Mosae selvakumar**, Enoch IV. A new fluorescent chemosensor for cadmium (II) based on a pyrene-appended piperidone derivative and its β -cyclodextrin complex. *Luminescence*. 2018 ,33(3), 538-544
9. Murugesan, Kumaresan, Vanthana Jeyasingh, Sudha Lakshminarayanan, Tamil Selvan Govindaraj, **P. Mosae Selvakumar**, Selvapalam Narayanan, and Lakshminarayanan Piramuthu. "Electron-deficient tripodal amide based receptor: An exclusive turn-on fluorescent and colorimetric chemo sensor for cyanide ion. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 198 (2018): 309-314
10. M Sumithra, G Selvan, S Suganthi, **P Mosae Selvakumar**, Israel VMV Enoch, Binding interaction of a piperazinyquinoline derivative with β -cyclodextrin and Cd²⁺ ions, *Indian Journal of Chemistry-A*, 57A(02) 2018
11. Sumathi Poomalai, Anju Kannan Padinjareveetil, Sivaraj Ramasamy, Tamil Selvan Govindaraj, **P. Mosae Selvakumar** and Israel Vijayaraj Muthu Vijayan Enoch, A simply synthesized biphenyl substituted piperidin-4-one for the fluorescence chemosensing of Cd²⁺, *Luminescence*, 201, 1-6, DOI: 10.1002/bio.3337
12. Jone Kirubavathy S, Saranya J, Sathya N, Israel V M V Enoch, **Mosae Selvakumar P**, Chitra Subramanian, Synthesis, Characterization and biological evaluation of Ru(III) mercapto-pyrimidine Schiff base complexes, *Applied Organometallic Chemistry*, 2017, 31(11), DOI:10.1002/aoc.3760
13. R. Mariselvam, A. J. A. Ranjitsingh, **P. Mosae Selvakumar**, A. Usha Raja Nanthini, Eco friendly natural dyes from *Syzygium cumini* (L.)(Jambolan) fruit seed endosperm

- and to preparation of antimicrobial fabric and their washing properties. *Fibers and Polymers*, 2017, 18 (3), 460-464
14. Pawan Kumar Kaul, A. Joel Samson, I. V. M. V. Enoch, **P. Mosae Selvakumar**, Synergistic effect of LDH on thermal and flame retardant properties of unsaturated polyester nano-composite containing TXP, *Advanced material Proceedings*, 2017, 2(5), 351-356.
 15. S Jone Kirubavathy, R Velmurugan, R Karvembu, NSP Bhuvanesh, Israel VMV Enoch, **P Mosae Selvakumar**, S Chitra, Co(II) complex of 2-amino-6-methylbenzothiazole: synthesis, structure and biological evaluations, *Indian Journal of chemistry*, 2016, 55A, 1297-1304
 16. Sumithra, M., Sivaraj, R., Selvan, G. T., **P.MosaeSelvakumar**, Enoch, I. V. Ca²⁺ ion sensing by a piperidin-4-one derivative and the effect of β -cyclodextrin complexation on the sensing. *Journal of Luminescence*, 2017, 185, 205-211. <http://dx.doi.org/10.1016/j.jlumin.2017.01.021>
 17. Pawan Kumar Kaul, A. Joel Samson, G. Tamil Selvan, IVMV Enoch, **P.MosaeSelvakumar**, *DOI:10.1002/aoc.3760, Synergistic effect of LDH in the presence of organophosphate on thermal and flammable properties of an epoxy nanocomposite, *Applied clay science*, 2017, 135, 234-243, <http://dx.doi.org/10.1016/j.clay.2016.09.031>
 18. Thangaraj SE, Antony EJ, Yousuf S, **P.MosaeSelvakumar**, Dhanaraj P, Enoch IV. Binding interaction of a fluoranthene–thiol on gold nanoparticles with β -cyclodextrin and DNA. *Journal of Experimental Nanoscience*. 2017, 1;12(1):62-71
 19. S Jone Kirubavathy, R Velmurugan, R Karvembu, NSP Bhuvanesh, Israel VMV Enoch, **P Mosae Selvakumar**, D Premnath, S Chitra, Structural and molecular docking studies of biologically active mercaptopyrimidine Schiff bases, *Journal of Molecular Structure*, 2016, DOI: 10.1016/j.molstruc.2016.07.082
 20. R. Mariselvam, A. J. A. Ranjitsingh, **P. Mosae Selvakumar**, Abdullah A. Alarfaj, Murugan A. Munusamy: Spectral Studies of UV and Solar Photocatalytic Degradation of AZO Dye and Textile Dye Effluents Using Green Synthesized Silver Nanoparticles. *Bioinorganic Chemistry and Applications* 06/2016; 2016(3). DOI:10.1155/2016/8629178
 21. Eva Janet Antony, Abhishek Shibu, Sivaraj Ramasamy, **P.MosaeSelvakumar**, Israel V.M.V. Enoch: Loading of atorvastatin and linezolid in β -cyclodextrin–conjugated cadmium selenide/silica nanoparticles: A spectroscopic study, *Mater Sci Eng C Mater Biol Appl*. 2016 Aug 1;65:194-8. doi: 10.1016/j.msec.2016.04.034
 22. Rajathi Queen Paulpandi, Sivaraj Ramasamy, **P.MosaeSelvakumar**, F. Guillermo Díaz Baños, G. Villora, José P. Cerón-Carrasco, Horacio Pérez-Sánchez, Israel V. Muthu Vijayan Enoch: Enhanced Zn²⁺ ion-sensing behavior of a benzothiazole derivative on encapsulation by β -cyclodextrin. *RSC Advances* 02/2016; 6(19). DOI:10.1039/C6RA01202G
 23. Natesan Sudha, Sameena Yousuf, Enoch V.M.V. Israel, **P.MosaeSelvakumar**, Premnath Dhanaraj: On the accessibility of surface–bound drugs on magnetic nanoparticles. Encapsulation of drugs loaded on modified dextran–coated

- superparamagnetic iron oxide by β -cyclodextrin. *Colloids and surfaces B: Biointerfaces* 02/2016; 141. DOI:10.1016/j.colsurfb.2016.02.020
24. G. Tamil Selvan, M. Kumaresan, R. Sivaraj, Israel V.M.V. Enoch, **P. Mosae Selvakumar***: Isomeric 4-aminoantipyrine derivatives as fluorescent chemosensors of Al^{3+} ions and their molecular logic behaviour. *Sensors and Actuators B Chemical* 01/2016; 229. DOI:10.1016/j.snb.2016.01.097
 25. D Premnath, Israel V M V Enoch, **P Mosae Selvakumar**, M Indiraleka, J Jannet Vennila: Design, Synthesis, Spectral Analysis, In Vitro Anticancer Evaluation and Molecular Docking Studies of Some Fluorescent 4-Amino-2, 3-Dimethyl-1-Phenyl-3-Pyrazolin-5-One, Ampyrone Derivatives. *Interdisciplinary Sciences Computational Life Sciences* 01/2016; DOI:10.1007/s12539-015-0138-3
 26. V. Sherly Arputha Kiruba, **P. Mosae Selvakumar***, Arun Dakshinamurthy: Biocidal Nano-Silver Reinforced Activated Charcoal in Water Treatment. *Synthesis and Reactivity in Inorganic Metal-Organic and Nano-Metal Chemistry* 10/2015; 45(10). DOI:10.1080/15533174.2013.865221
 27. Sameena Yousuf, Israel V.M.V. Enoch, **P. Mosae Selvalumar**, Dhanaraj Premnath: *Colloids and Surfaces B: Biointerfaces*. 08/2015; 135. DOI:10.1016/j.colsurfb.2015.07.049
 28. Sameena Yousuf, Israel V. M. V. Enoch, **P. Mosae Selvakumar**, Dhanaraj Premnath: Loading of chromenones on superparamagnetic iron oxide-modified dextran core-shell nanoparticles: Openness to bind to β -cyclodextrin and DNA. *New Journal of Chemistry* 08/2015; DOI:10.1039/C5NJ00921A
 29. D. Premnath, **P. Mosae Selvakumar**, P. Ravichandiran, G. Tamil Selvan, M. Indiraleka, J. Jannet Vennila: *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 08/2015; 153. DOI:10.1016/j.saa.2015.08.008
 30. Eva Janet Antony, Masilamani Raj, Rajathi Queen Paulpandi, **P. Mosae Selvakumar**, Israel V M V Enoch: A Highly Selective Fluorescent Sensor for Pb^{2+} Based on a Modified β -Cyclodextrin. *Journal of Fluorescence* 07/2015; 25(4). DOI:10.1007/s10895-015-1588-z
 31. Sameena Yousuf, Ritty Alex, **P. Mosae Selvakumar***, Israel V. M. V. Enoch, Palani Sivagnana Subramanian, Yu Sun: Picking Out Logic Operations in a Naphthalene β -Diketone Derivative by Using Molecular Encapsulation, Controlled Protonation, and DNA Binding. *ChemistryOpen* 05/2015; 4(4). DOI:10.1002/open.201500034
 32. Mari Selvam, G. Athinarayanana, A. Usha Raja Nanthini , A.J.A. Ranjit Singh, K. Kalirajana, **P. Mosae Selvakumar**, Extraction of natural dyes from Curcuma longa, Trigonella foenum graecum and Nerium oleander, plants and their application in antimicrobial fabric. *Industrial Crops and Products* 03/2015; 70. DOI:10.1016/j.indcrop.2015.03.008
 33. **P. Mosae Selvakumar***, Churchil Angel Antonyraj, Revington Babu, Arun Dakshinamurthy, N. Manikandan, A. Palanivel: Green Synthesis and Antimicrobial Activity of Monodispersed Silver Nanoparticles Synthesized Using Lemon Extract.

- Synthesis and Reactivity in Inorganic Metal-Organic and Nano-Metal Chemistry* 03/2015; 46(2). DOI:10.1080/15533174.2014.971810
34. S. Deena, Arun Dakshinamurthy, **P. Mosae Selvakumar***: Green Synthesis of Silver Nanoparticle Using Banana (Musa) Sap. *Advanced Material Research*, 02/2015; 1086. DOI:10.4028/www.scientific.net/AMR.1086.7
 35. Sophia Selvarajan, J. Jerry, Arun Dakshinamurthy, A. Ramasubbu, **P. Mosae Selvakumar***: Development of Dye Sensitized Solar Cell Using Eco-Friendly Dyes Extracted from Natural Resources. *Advanced Material Research* 02/2015; 1086. DOI:10.4028/www.scientific.net/AMR.1086.68
 36. R. Mariselvam, A.J.A. Ranjitsingh, A. Usha Raja Nanthini, K. Kalirajan, C. Padmalatha, **P. Mosae Selvakumar**: Green synthesis of silver nanoparticles from the extract of the inflorescence of *Cocos nucifera* (Family: Arecaceae) for enhanced antibacterial activity. *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 04/2014; 129C. DOI:10.1016/j.saa.2014.03.066
 37. V. Sherly Arputha Kiruba, Arun Dakshinamurthy, P. S. Subramanian, **P. Mosae Selvakumar**: Green Synthesis of Biocidal Silver-Activated Charcoal Nanocomposite for Disinfecting Water. *Journal of Experimental Nanoscience* 01/2014; 10(7). DOI:10.1080/17458080.2013.848295
 38. V. Sherly Arputha Kiruba, Arun Dakshinamurthy, **P. Mosae Selvakumar***: Eco-Friendly Biocidal Silver-Activated Charcoal Nanocomposite: Antimicrobial Application in Water Purification. *Synthesis and Reactivity in Inorganic Metal-Organic and Nano-Metal Chemistry* 09/2013; 43(8). DOI:10.1080/15533174.2012.749906
 39. **P. Mosae Selvakumar**, S. Nadella, Jashobanta Sahoo, E. Suresh, P.S. Subramanian: Copper(II) bis-chelate paddle wheel complex and its bipyridine/phenanthroline adducts. *Journal of Coordination Chemistry* 01/2013; 66(2). DOI:10.1080/00958972.2012.755521
 40. Sandeep Nadella, **P. Mosae Selvakumar**, Eringathodi Suresh, Palani S Subramanian, Markus Albrecht, Michael Giese, Roland Fröhlich: Lanthanide(III) Complexes of Bis-semicarbazone and Bis-imine-Substituted Phenanthroline Ligands: Solid-State Structures, Photophysical Properties, and Anion Sensing. *Chemistry - A European Journal* 12/2012; 18(52). DOI:10.1002/chem.201201705
 41. **P. Mosae Selvakumar**, S. Nadella, R. Fröhlich, M. Albrecht, P.S. Subramanian: A new class of solvatochromic material: Geometrically unsaturated Ni (II) complexes. *Dyes and Pigments* 12/2012; 95(3). DOI:10.1016/j.dyepig.2012.05.008
 42. **P. Mosae Selvakumar**, P. Yowan Jebaraj, Jashobanta Sahoo, E. Suresh, K. Jeya Prathap, R. I. Kureshy, P. S. Subramanian: The first bromide ion directed double helicate and its role in catalysis. *RSC Advances* 08/2012; 2(20). DOI:10.1039/C2RA20507F
 43. **P. Mosae Selvakumar**, E. Suresh, S. Waghmode, P.S. Subramanian: Synthesis, Structure, EPR and DFT calculation on dinuclear Paddle Wheel Cu(II) Complexes

- with Bis-chelate rings. *Journal of Coordination Chemistry* 10/2011; 56(20). DOI:10.1080/00958972.2011.622754
44. **P. Mosae Selvakumar**, Sandeep Nadella, K. Jeya Prathap, R. I. Kureshy, E. Suresh, P. S. Subramanian: Synthesis, crystal structure, and catalytic studies on dinuclear copper(II) mesocates. *Inorganica Chimica Acta* 09/2011; 375(1). DOI:10.1016/j.ica.2011.04.033
 45. **P. Mosae Selvakumar**, Neha Carpenter, E. Suresh, Palani Sivagnana Subramanian: Synthesis and Crystal Structure of Some Macrocyclic Ring Compounds. *Synthetic Communications* 04/2011; 41(9). DOI:10.1080/00397911.2010.481752
 46. **P. Mosae Selvakumar**, E. Suresh, P.S. Subramanian: Single stranded helical supramolecular architecture with a left handed helical water chain in ternary copper(II) tryptophan/diamine complexes. *Polyhedron* 02/2009; 28(2). DOI:10.1016/j.poly.2008.10.072
 47. **P. Mosae Selvakumar**, E. Suresh, P.S. Subramanian: Hydrogen bonded helices: Synthesis, crystal structure and self-assembled microtubes. *Journal of Molecular Structure* 02/2009; 919(1). DOI:10.1016/j.molstruc.2008.08.016
 48. **P. Mosae Selvakumar**, E. Suresh, P.S. Subramanian: New macrocyclic Cu(II)-bischelates with paddle wheel Cu 2-acetate cage. *Inorganica Chimica Acta* 04/2008; 361(5). DOI:10.1016/j.ica.2007.08.001
 49. S Kalyanaraman, V Krishnakumar, **P Mosae SelvaKumar**, P.S. Subramanian, K Ganesan: Synthesis, structure and spectral investigation of hydrogen bonded helical chain in mixed ligand Cu(II) pyrimidone complex. *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 02/2008; 71(2). DOI:10.1016/j.saa.2007.11.038
 50. **P. Mosae Selvakumar**, E. Suresh, P.S. Subramanian: Synthesis, spectral characterization and structural investigation on some 4-aminoantipyrine containing Schiff base Cu(II) complexes and their molecular association. *Polyhedron* 03/2007; 26(4). DOI:10.1016/j.poly.2006.09.004
 51. **P. Mosae Selvakumar**, B. Selvakumar, M. Thangaraj Pandiyan, S. Meenakshi Sundaram, K. Senthil Velrajan, I. Ravi Kumar, R. Venkataraman, Comparative pharmacognostic studies of genuine and commercial samples of Piper nigrum and its adulterants, *Int. J. Chem. Sci.*, 2006,4, 171-176
 52. **P. Mosae Selvakumar** and S. Edwin Jayaraj B. Sri Reegan, A. Palanivel, R. Mariselvam, A.J.A Ranjith Singh, Comparative Analytical Study on Various Market Palm Jaggery Samples and their Use in Green Synthesis of Silver Nanoparticles, *International journal of Nanoscience and Nanotechnology*, 2013,4, 1, 125-135
 53. SE Thangaraj, EJ Antony, GT Selvan, **P. Mosae Selvakumar**, I Enoch, A New Fluorenone-based Turn-on Fluorescent Al³⁺ Ion Sensor, *Journal of Analytical Chemistry* 74 (1), 87-92 54.
 54. C Varadaraju, **P. Mosae Selvakumar**, G Tamilselvan, IVMV Enoch, Evaluation of metal ion sensing behaviour of fluorescent probe along with its precursors: PETCHEF mechanism, molecular logic gate behaviour and DFT studies, *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 2019, 1-11 55. P.

55. P Dhanaraj, TG Selvan, IVMV Enoch, **P.Mosae Selvakumar**, M Indiraleka, Naphthoyl Derivative of 4-Aminoantipyrine Based Al³⁺ Ion Sensor: Molecular Docking and Anticancer Studies, *Sensor Letters* 2019, 17 (2), 110-119 56.
56. C Varadaraju, **P. Mosae Selvakumar**, TG Selvan, I Enoch, P Rajasingh, Detection of Cu²⁺ Ion by a Simple Antipyrine Based Fluorescence Dyad System Through Fluorescence Quenching, *Sensor Letters* 17 (4), 257-261 57.
57. P Sumathi, S Suganthi, R Sivaraj, GT Selvan, **P. Mosae Selvakumar**, IVMV Enoch Novel supramolecular β -cyclodextrin-piperidin-4-one complex assembled on gold nanoparticles. Selective detection of Cd²⁺ ions, *Microchemical Journal* , 2019, 150, 104066

RESEARCH PAPERS PRESENTED IN CONFERENCES/ SYMPOSIUM

1. V.Chitra, G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. A highly selective fluorescent ‘turn-on’ chemosensor for VO³⁺ ions: its Molecular logic behaviour and DFT studies. Presented at "International Conference on Functional materials" organized by Thiagarajar college, Madurai, on Sept 7th , 2017(**received Best poster award**)
2. G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. A highly selective fluorescent ‘turn-on’ chemosensor for Al³⁺ ions and its Molecular logic behaviour and Water purification. Presented at "International Conference on Membrane technology and its applications" organized by National institute of technology, trichy, on Feb 23rd , 2017
3. P K Kaul G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. Effect of LDH on thermal and flame retardant properties of polyester nanocomposite. Presented at International workshop on functional materials and devices, Organized by Manonmaniam sundaranar university, Tirunelveli , during 8th to 12th Jan , 2017(**received Best poster award**)
4. G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. A highly selective fluorescent ‘turn-on’ chemosensor for Al³⁺ ions and its Molecular logic behaviour.. Presented at International conference on functional materials, Organized by PSNCET, Tirunelveli , during 7th to 10th Sept , 2016
5. G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. Zinc (II) helicate based on Naphthalene β -dione derivative: Selective Fluorescence Sensor of ATP and Tryptophan. Presented at International conference on functional materials, Organized by PSNCET, Tirunelveli , during 7th to 10th Sept , 2016
6. P K Kaul, P.Mosae Selvakumar. Synergistic effect of LDH on thermal and flame retardant properties of unsaturated polyester nanocomposite containing TXP. Presented at International Conference on Materials Science & Technology (ICMTech -2016) is a four-day international eventorganised by International Association of Advanced Materials (IAAM), University of Delhi and VBRI Press during 01 - 04 March, 2016
7. Joel Samson, P K Kaul, G. Tamil Selvan P.Mosae Selvakumar. Synthesis and Characterization of Amino Antipyrine Phosphate Salt Intercalated Zn/Al Layered Double Hydroxide for Flame Retardant Polymer Coatings. Presented at International Conference on Nanomaterials for Frontier Applications” at Coimbatore Institute of Technology, Coimbatore, Tamilnadu during December 2 - 4, 2015

8. I M V Enoch, P.Mosae Selvakumar.Surface Modification Of Gold Nanoparticles With Fluoranthene and Its Complex Formation With β -Cyclodextrin. Presented at Mid Year National Symposium on chemistry, Organized by CRSI, NIT Trichy , during 23rd to 25th July , 2015
9. G. Tamil Selvan,Y. Sameena I M V Enoch, P.Mosae Selvakumar. Development Of Fluorescent Molecular Sensor Based On Naphthalene β - Diketone Derivative: Molecular Logic Gates Based On Molecular Encapsulation, Controlled Protonation, And Dna Binding. Presented at Mid Year National Symposium on chemistry, Organized by CRSI, NIT Trichy , during 23rd to 25th July , 2015
10. G. Tamil Selvan, I M V Enoch, P.Mosae Selvakumar. A Highly selective turn-on fluorescent Mg^{2+} sensor based on a naphthol derivative. Presented at Mid Year National Symposium on chemistry, Organized by CRSI, NIT Trichy , during 23rd to 25th July , 2015
11. G.Betsy Reshma, P.Mosae Selvakumar, ChoLess- defense against high cholesterol-natural, non-invasive, Presented at National Symposium on Invention and innovation for sustainable development-IISD15, Organized by Karunya university, Coimbatore, on 18th Feb , 2015
12. Santhosh Jeferson, P.Mosae Selvakumar, Nano SHOE POLISH, Presented at National Symposium on Invention and innovation for sustainable development-IISD15, Organized by Karunya university, Coimbatore, on 18th Feb , 2015
13. R. Mari Selvam, A.Usha Raja Nanthini, A.J.A. Ranjit Singh, K. Kalirajan,G. Athinarayanan and P. Mosae Selvkumar Eco-friendly natural dyes from *Curcuma longa*,*Trigonella foenum graecum* and *Nerium oleander*, and their application in antimicrobial fabric, , Presented at National Symposium on Invention and innovation for sustainable development-IISD15, Organized by Karunya university, Coimbatore, on 18th Feb , 2015
14. G. Tamil Selvan, P.Mosae Selvakumar, Spectroscopic characterization and biological activities of silver nanoparticles synthesized using unripened fruit latex of *Azadirachta indica*, Presented at National Symposium on Invention and innovation for sustainable development-IISD15, Organized by Karunya university, Coimbatore, on 18th Feb , 2015
15. J. Edwin Moses and P. Mosae Selvakumar. Low cost Melting point apparatus. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
16. P. Mosae Selvakumar. The journey from problem to product through invention and innovation. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
17. J. Jovitha Mon and P. Mosae Selvakumar. Helicates in catalysis and molecular recognition. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
18. Deena S, Arun D and P. Mosae Selvakumar. Nanoparticle incorporated antimicrobial fabric. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014

19. Pawan Kumar Kaul and P. Mosae Selvakumar, Polymer/LDH nano composite: Green flame retardant for sustainable environment and health care. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014.
20. Ritty Alex, P. Mosae Selvakumar, D. Premnath and N. Ananthi. Docking studies on epinephrine and Norephedrine analogues for enhanced drug activity. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
21. J. Sam Jacob, Ganesh Lenin K, I. P. Kumar, S. Jeyakumar, Y. Nerthigan, D. Arun and P. Mosae Selvakumar. Microbial fuel cell fabrication and optimization of electric output using isolated electogens. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
22. A. Antony Vijay, S. Arul and P. Mosae Selvakumar. NRG Walk. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
23. G. Tamil Selvan, G. Prabakaran, R. Marichelvam, A.J.A. Ranjith Singh and P. Mosae Selvakumar. Evaluation of biopesticidal activity of latex various plants: A Green chemistry solution. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
24. Jehu Singh, Raghu, G. Tamil Selvan, and P. Mosae Selvakumar*. Degradation of Reactive Turquoise blue dye HSG. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014.
25. G. Tamil Selvan, G. Prabakaran, R. Marichelvam, A.J.A. Ranjith Singh and P. Mosae Selvakumar. Evaluation of biopesticidal activity of latex various plants: A Green chemistry solution. Presented at National Symposium on Invention and innovation for sustainable development, Organized by Karunya university, Coimbatore, on 21st Mar , 2014
26. G. Prabakaran, G. Tamil Selvan, R. Marichelvam, A.J.A. Ranjith Singh and P. Mosae Selvakumar. Menthol based paddle wheel Cu(II) complexes: Synthesis, Characterization and antimicrobial activities. Presented at International Conference on Chemistry-Frontiers & Challenge, Organized by PSGR Krishnammal College for Women, Coimbatore, on Feb 5-7, 2014.
27. G. Tamil Selvan, G. Prabakaran, R. Marichelvam, A.J.A. Ranjith Singh and P. Mosae Selvakumar*. From plant latex to bio pesticide: Green chemistry approach. Presented at International Conference on Chemistry - Frontiers & Challenge, Organized by PSGR Krishnammal College for Women, Coimbatore, on Feb 5-7, 2014.
28. Jasper Jovitha Mon and P. Mosae Selvakumar. Metallo supramolecular helicates based on Phenazine: Design, Synthesis and molecular recognition property. Presented at International Conference on Chemistry - Frontiers & Challenge, Organized by PSGR Krishnammal College for Women, Coimbatore, on Feb 5-7, 2014.
29. S. Deena, Arun Dakshinamurthy and P. Mosae Selvakumar. Development of nanoparticle incorporated antimicrobial fabric using banana (*Musa*) sap. Presented at ICMENC-13 International Conference on Materials for energy and nano convergence,

Organized by Hindustan University and Dongguk University, Chennai, on July 4-6, 2013

30. Sophia Selvarajan, J. Jerry, Arun Dakshinamurthy and P. Mosae Selvakumar, Development of Dye Sensitized Solar Cell using eco-friendly natural dyes extracted from plants. Presented at ICMENC-13 International Conference on Materials for energy and nano convergence , Organized by Hindustan University and Dongguk University, Chennai, on July 4-6, 2013
31. Shannen C Rajan, D. Mark David Samraj, R. Masilamani, P. Mosae Selvakumar and M.V.I Enoch, Surface modification of iron oxide nanoparticle. Presented at ICMENC-13 International Conference on Materials for energy and nano convergence , Organized by Hindustan University and Dongguk University, Chennai, on July 4-6, 2013
32. S. Ramaraj, A. Palanivel, Ritty Alex, G. Tamil Selvan and P. Mosae Selvakumar. Synthesis and characterization of 4-aminoantipyrine derived fluorescent schiff bases and their Cu(II) complexes. Presented at ICBIC-13 International Conference, Organized by Periyar University, Salem, on Feb 20-22, 2013
33. Ritty Alex and P. Mosae Selvakumar, Synthesis and crystal structure of amine and diacid based co crystal. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
34. Sharon Singh and P. Mosae Selvakumar. River hydro-tidal power plant-The energy source for India. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
35. Sophia Selvarajan, J. Jerry, Arun Dakshinamurthy and P. Mosae Selvakumar. Development of dye sensitized solar cell using eco-friendly natural dyes from extracted from natural resources. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
36. Abhisek Shibu, Eugene Thangaraj, Samuel Soundararaj, Israel V.M.V. Enoch and P. Mosae Selvakumar. Molecular machines found in Nature. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013. (Best poster Award)
37. Thaiskang Jamatia, Abhash Kujur, Anne Arolis, Israel V.M.V. Enoch and P. Mosae Selvakumar. The journey of carbon through ages. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013..
38. T. Srinivas, K. R. Raja Aasaan, C. David, J. S. Santhosh Jeferson, Israel V.M.V. Enoch and P. Mosae Selvakumar. Nanotechnology in sport: the power of small. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
39. S. Bharath, R. Masilamani, Libitha Babu, Jose Varghese, Israel V. M. V. Enoch and P. Mosae Selvakumar. A revisit to Nanotechnology of ancient times: Bringing the past to the present for lightening the future. Presented at national conference on

Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.

40. Shannen C. Rajan, Mark David Samraj, Eva Janet Antony, Israel V.M.V. Enoch and P. Mosae Selvakumar. Self-assembly and Self-assembled monolayers: the art of effortless assembly. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
41. G. Rachel, Adithyraj, Sriram, Prakash, Binojen Singh, Israel V.M.V. Enoch and P. Mosae Selvakumar. Nanotechnology in food and nutrition. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
42. R. Rishikesan, R. Murugesan, R. Venkataraman, Arvind Sivasubramanian, Ranjith P Karuvalam and P. Mosae Selvakumar. Design, Synthesis and Biological Evaluation of Some 4, 4'-bis-{2-[4-aryl]-4-thiazolyl} biphenyl derivatives as Potent Antimicrobial and Anticancer Agent. Presented at national conference on Molecules to materials-Solving problems of mankind (NCMM13) conducted by Department of Chemistry, Karunya University, Coimbatore, on Feb 15-16, 2013.
43. P. Mosae Selvakumar, Edwin Jayaraj, R. Marichelvam, A.J.A. Ranjit Singh, Sri Reegan and A. Palanivel. Eco-Friendly Synthesis Ag nanoparticles using palm jaggery and its antimicrobial studies. Presented in NCM-2012 National Conference, Organized Karunya University, Coimbatore, on Dec 3-4, 2012.
44. Shannan C Rajan, Ritty Alex, Eva Janet Antony, Annie arolis, Libitha Babu, R.Masilamani, G. Rachel, I M V Enoch and P. Mosae Selvakumar, Revealing the hidden secrets of traditional building materials-A material chemistry approach. Presented in NCM-2012 National Conference, Organized Karunya University, Coimbatore, on Dec 3-4, 2012.
45. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Self-assembled Cu (II) MOFs with N, O donors mixed ligands. Presented in MAM-2012 international Conference, Organized by KSRCT and World Class University-Korea, Coimbatore, on Nov 21-25, 2012.
46. V. Sherly Arputha Kiruba, Arun Dakshinamurthy and P. Mosae Selvakumar. Silver-Activated Charcoal Nanocomposite for Microbial Decontamination of Water. Presented in MAM-2012 international Conference, Organized by KSRCT and World Class University-Korea, Coimbatore, on Nov 21-25, 2012
47. P. Mosae Selvkumar, R. Mari selvam, Mark David Samraj, Samuel Soundararaj, A.J.A. Ranjit Singh. Use of young palm leaf's outgrowth for antimicrobial and other applications presented in NCPM-2012 Conference, Organized by Department of Botany at Bharathiyar University, Coimbatore, on Oct 4-5, 2012.
48. P. Mosae Selvakumar, P. Xavier, S. Jaya Sathiya, A.J.A. Ranjith Singh and M.V. Sudhakaran. Do male and female students of rural area differ in their personality? Presented in National Seminar on challenges for quality teacher education in the present scenario, Organized by St. Joseph college of education, Nanguneri, on September 28-29, 2012.
49. Sherly Arputha Kirupa, P. Mosae Selvakumar, Arun Dakshinamurthy. Eco-Friendly Synthesis of Ag nanoparticles and their anti-microbial studies, presented in ANM-

2012 Conference, Organized by Centre for NanoScience & Technology at Periyar University, Salem, on Feb 6-7, 2012

50. P. Mosae Selvakumar, P.S. Subramanian, Revington Babu, N. Manikandan and A. Palanivel. Environmental Friendly Synthesis of nanoparticles using citrus fruits, presented in NCAST-2011 Conference, Organized by Saveetha School Engineering at Saveetha University, Chennai, on March 01, 2011.
51. P. Mosae Selvakumar, P. Koilraj, N. Manikandan and A. Palanivel. Eco-Friendly Synthesis Ag nanoparticles using Lemon juice, presented in Environ nano-2011 Conference, Organized by Manonmaniam Sundaranar University at SPKCES, Alwarkurichi, Tamilnadu, during Feb 5-6, 2011 (best paper award).
52. P. Mosae Selvakumar, P. Koilraj, N. Prabha and R. Venkatraman. Bio Synthesis of Nano materials using some medicinal plants, Presented at ETN-2010 Conference, Organized by Manonmaniam Sundaranar University at SPKC, Alwarkurichi, Tamilnadu, during Dec 21-22, 2010.
53. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Design, Synthesis of Supramolecular Helices and their Self Assembly into Nano Structures, Presented at Environ nano-2010 Conference, Organized by Manonmaniam Sundaranar university at SPKCES, Alwarkurichi, Tamilnadu, during Feb 5-6, 2010. (Young Scientist award)
54. P. Mosae Selvakumar, S. Nadella, N. Carpenter, E. Suresh and P. S. Subramanian. Single stranded, Double Stranded and Circular Helicates, Presented at MTIC-XIII Symposium Organized at IISC, Bangalore, during Dec 7-10, 2009.
55. Sandeep Nadella, P. Mosae Selvakumar and P. S. Subramanian. NMR and Electrochemical Investigation on series of Trimetallic Double Stranded metallohelicates, Presented at CRSI-XII Symposium Organized at IICT, Hyderabad, during Feb 10-12, 2010.
56. Neha Carpenter, P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Synthesis and Crystal structure for Macrocyclic Rings and Macrocyclic-like Cu₂ bis-chelate Rings. Presented at Symposium organized by IITB –IRIS12 (International Symposium on Inorganic Ring Systems) at NIO, Goa, during Aug 16 - 21, 2009.
57. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Self Assembled helical Luminescent chiral supramolecule with left handed helical water chain in Ternary copper(II) diamine complex. Presented at conference organized by Indian chemical Society –AGRSM V at M. S. University, Baroda, during 17th Feb 2008.
58. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Phenanthroline induced Inclusion of helical water chain in $[\{Cu(L-Tryp)(Phe)\}(ClO_4)(3H_2O)]$, Presented at MTIC-XII Symposium Organized at IIT, Chennai, during Dec 6-8, 2007.
59. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Self Assembled Helical Strands and Hollow Microtubes of some Organic Dicarboxylic Acids. Symposium organized by RSC–WIS Student Symposium-2006 organized at M.S. University, Baroda on Oct 13 -14th, 2006.
60. P. Mosae Selvakumar and R. Venkataraman. Comparative Pharmacognostic Studies of Genuine and Commercial Samples of *Pepper Nigrum* and its Adulterants. Contributed to National Symposium on recent trends in bioscience, Department of Biology, Sri Paramakalyani College, Alwarkurichi, Feb 27-28, 2004.

BOOK CHAPTERS

1. P. Mosae Selvakumar, E. Suresh and P. S. Subramanian. Self-assembled Cu (II) MOFs with N, O donors mixed ligands, *Nano Biomaterials*, Bloomsbury Publishing India Pvt. Ltd, pp. 215–220 (2012), ISBN 978-93-82563-37-2
2. V. Sherly Arputha Kiruba, Arun Dakshinamurthy and P. Mosae Selvakumar. Silver-Activated Charcoal Nanocomposite For Microbial Decontamination of Water, Bloomsbury Publishing India Pvt. Ltd, *Applications of Nano Materials: Electronics, Energy and Environment*, pp. 345–352 (2012), ISBN 978-93-82563-35-8
3. Sophia Selvarajan, Arun Dakshinamurthy, V. Madhu, I M V Enoch and P. Mosae Selvakumar, Dye Sensitized Solar Cell using Eco-friendly Natural Dyes, *Sustainable technologies in health care and environment*; pp 52-63, ISBN 9788190387101

PATENTS FILED

1. A.J.A. Ranjit singh, R. Mariselvam, A. Usha Raja Nanthini, P. Mosae selvakumar. Eco friendly golden yellow dye from *Syzygium cumini* (L.) Jambolan) fruit seed endosperm extract and its application in the preparation of antimicrobial fabric, Indian Patent Application Number-2560/CHE/2014
2. P. Mosae Selvakumar, Arun Dakshinamurthy and S. Deena. Method of making antimicrobial fabric using silver nanoparticles, banana sap and natural dye, Indian Patent Application Number-3774/CHE/2014
3. P. Mosae Selvakumar, A.J.A. Ranjit singh, R. Mariselvam,. Development of eco – friendly wound healing bandage from palmyra palm leaf secretions, Indian Patent Application Number-4011/CHE/2015.
4. C. Sureshkumar, C.Mariappan, A.Palavesm,P. Mosae Selvakumar. Method for the removal of highly resistant *Pseudomonas aeruginosa* / *Aeromonas hydrophila* / *Burkholderia cepacia* from infested Bore well water to different purification stages of water purification system at aseptic pharmaceutical manufacturing, Indian Patent Application Number-201641033678 A .

MEMBERSHIP IN PROFESSIONAL BODIES

- Life member of Chemical Research Society of India (CRSI)
- Life member of Material Research Society of India (MRSI)
- Life member of Luminescence Society of India (LSI)
- Member of American Chemical Society (ACS)
- Member International Union of Crystallography (IUCr)

EDITORIAL BOARD AND REVIVER FOR JOURNALS

- Associate editor of MOJ Bioorganic & Organic Chemistry
- Editorial board member of the Journal of Chemistry & Applied Biochemistry
- Editorial board member of the Advances in recycling & Waste Management
- Member of the Scientific Committees and Editorial Review Board at WASET

- Reviewer for many journals of ACS, RSC, Wiley, Science Direct, Springer, Taylor and Francis publications.

EXTRA CURRICULAR ACTIVITIES

- Delivered many lectures to make awareness on conservation of nature/sustainable development/self-reliant life/Palmyrah palm/tree planting among youths in colleges and schools of Tamilnadu, India
- Served as company under officer in National Cadet Corps Senior Army wing and passed NCC-C certificate.
- Trained under several organizations like NSS, JRC and SCOUT.
- Served as counsellor to provide career guidance and counselling for many students and youths.
- Karate black belt holder in Okinawa Goju Ryu Karate and served as a trainer for hundreds of students.

TRAINING/ LECTURES- PARTICIPATED

- Participated in a special seminar on Crystallography on Feb 18th 2017, organized by IUCr at Karunya university
- International workshop on functional materials and devices, Organized by Manonmaniam sundaranar university, Tirunelveli , during 8th to 12thJan , 2017
- Participated in Faculty Enrichment Programme (FEP) for Teaching Fraternity of KU on 25th and 26th June 2015, organized by HRD, Karunya university
- Participated in workshop on "Intellectual Property Rights in Development of MSME" on 20-21 Dec 2013 at MCET, jointly organized by National Research Development Corporation (NRDC) and MCET, Pollachi.
- Participated in DBT sponsored Short term training programme on Bionanomaterials for pest and disease management, conducted by Crop protection research centre, St Xavier's college, Palayamkottai, Tamilnadu, on 14th – 30th May 2013
- Participated in DST-NIMAT sponsored Entrepreneurship awareness camp at School of business, leadership and management, Karunya University on 15 – 16th March 2013.
- Participated in National level workshop on assessing communicative competence of learners conducted by national testing service – India, central institute of Indian languages , (Ministry of HRD, Govt of India) and department of English, Karunya University on 29th – 31st October 2012.
- Participated in Workshop for 'Young Lecturers Towards Developing Foundational Leadership among Young College Teachers' conducted by AIACHE at Arulandar College, Karumathur, Madurai (Jun1-2, 2012)

- Participated and trained in Staff Development Programme conducted by AICTE and Alameen Eng.College at erode (Jun9-21, 2011)
- Successfully completed the training program on Technology Led Entrepreneurship (mini MBA programme), conducted by CSIR&IIM-Bangalore during the period from June 1 to June 22, 2010 at IICT, Hyderabad.
- Participated in Dynamic Self Awakening Training program, conducted by Dynamic Self Awakening India Pvt. Ltd during Sep. 18 - 20, 2010 at Pondicherry.
- Participated in Frontier Lecture Series in Chemistry, organized by JNCASR Bangalore during Feb. 17 – 18,2008 at CSMCRI, Bhavnagar.

WORKSHOP/TRAINING/ SEMINAR- ORGANIZED

- National Conference on Molecules and Materials for sustainable development(NCMM18) from April 6th 2018 at Department of Chemistry, Karunya University
- National national level workshop on Molecular spectroscopy on 11th Jan 2018 at Department of Chemistry School of Science and Humanities, Karunya University
- Innovative products exhibition on National science day-2016 at School of Science and Humanities, Karunya University
- National Symposium on Invention and Innovation for Sustainable Development (IISD15) on 15th April 2015 at School of Science and Humanities, Karunya University
- National national level workshop on UV-visible and Fluorescence spectroscopy from Jan 30 to 31st 2015 at Department of Chemistry School of Science and Humanities, Karunya University
- National Symposium on Invention and Innovation for Sustainable Development (IISD14) on 21st march 2014 at School of Science and Humanities, Karunya University
- National Conference on Molecules to Materials - Solving problems of mankind (NCMM13) from Feb 15 to 16th 2013 at Department of Chemistry, Karunya University
- Organic Chemistry Laboratory Workshop on September 5th 2012.
- Seminar on Water Conservation, Chemistry and Entrepreneurship
- Many training programs for IPR course

LECTURES DELIVERED

- Invited lecture on “Science for sustainable development” at Tiruppur Chikkanna college of arts and science, Tiruppur on 6th August , 2019
- Invited lecture on “palmyrah palm for sustainable development” in national seminar on Recent trends in chemistry at JP college of arts and science, Aikudi on 5th August , 2019

- Invited lecture on “Opportunities and challenges in palmyrah palm research” at Technology transfer programme at Palmyrah research institute, Kaithady, jafna, srilanka on 12th July, 2019
- Invited lecture on “value added products from palmyrah palm” at Palmyrah Development Board, jafna, srilanka on 11th July, 2019
- Invited lecture on “Medicinal values of palmyrah palm” at 2nd world conference on palmyrah economy at TSA arts college, perur, coimbatore on 4th May, 2019
- Invited lecture on “IPR” at Lady Doak college, Madurai on 18th Feb, 2019
- Invited lecture on “Environment, Chemistry and catalysis” at ERK college, Erumaiyanpatty on 30th Jan, 2019
- Invited lecture on “Fluorescent Chemosensors for Main group metal ions” at International symposium on Main group Molecules to materials in IISc, bangaloure on 31st Oct, 2018
- Awareness talk on “Solution for the environmental pollution”, organised by YRC at Kamarajar Govt Arts college, Surandai on 14th September, 2018
- Key note address on “The Applications of Supramolecular chemistry in the detection of environmental pollutants” at International conference on Applied sciences in National Dong Hwa university, Hualien, taiwan on 12th June, 2018
- Key note address on “Applications of Green chemistry towards sustainable development” at national conference on environmental science and technology in Department of Environmental biotechnologyMS university, Tirunelveli on 19th January, 2018
- Key note address on “Green chemistry: The art of achieving sustainable development and peace” at national conference on green chemistry for clean environment in Department of chemistry St Mary’s college, tucicorin on Dec 8th, 2017
- Invited talk on “The art of converting molecules into machines” at Department of bio technology in Mother Teresa Women’s University, Kodaikanal on Sep 25th, 2017
- Invited talk on “Development of sensors for metal ions towards separation technology” at "International Conference on Membrane technology and its applications" organized by National institute of technology, trichy, on Feb 23rd, 2017
- Special talk on “Social issues in india” for NSS Voluteers, organized by NSS, Karunya University, Coimbatore on 10th Oct, 2015
- Invited talk on “Chemistry for Peace” at "National Seminar on Managing risks of Hazardous chemicals at work" organized by Mother Teresa Women’s University, Kodaikanal on Sep 28th, 2015
- Special talk on "Chemistry and Biological techniques in nanoscience " in DBT sponsored Star College programme for B. Sc students of St Xaviers college on June 4, 2015.
- Special talk on "Problems into products" in Orientation programme for YRC students of Karunya University on February 21, 2014.

- Special talk on "Achievement through Science" for Orientation programme for B.Sc students of Sri Paramakalyani College on June 20, 2013
- Special lecture on IPR at Department of chemistry, Karunya University on Mar 13, 2012.
- Special lecture on "Bola DEDA-Journey of my first Chemical child" at Department of Chemistry, Karunya University on Oct 13, 2011

HOBBIES

Gardening-Chemical Biology, Cooking-Kitchen Chemistry, Reading-Mind Chemistry