Curriculum vitae

Dr NIDHIN PAUL, *M. Sc., M. Phil., Ph. D.*

Assistant Professor of Chemistry

Govt College Kasaragod, Kerala

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Objectives

Intend to build a career with leading corporate of hi – tech environment with dedicated people, willing to work as a key player in challenging and creative environment. To do challenging works in the field of Synthetic Organic / Spectroscopic / Organometallic Chemistry / Medicinal Chemistry.

Personal Informations

Current Position: Assistant Professor of Chemistry

Research Area: Organic Chemistry, Heterocyclic Chemistry, Organometallic Chemistry, Physical Organic Chemistry, NMR Spectroscopy, Medicinal Chemistry.

Research advisor: Professor Shanmugam Muthusubramanian, Organic division, Madurai Kamaraj University (University with potential for excellence)

Science discipline: Organic Chemistry

Date of Birth: January 31, 1980

Nationality: Indian

Marital Status: Married

Research Experience

November, 2006 - November, 2011: HETEROCYCLIC COMPOUNDS - SYNTHESIS AND BIOLOGICAL STUDIES. PhD awarded on 24/07/2012

Organic division, School of Chemistry, Madurai Kamaraj University, Madurai, India.

Advisor: **Professor Shanmugam Muthusubramanian.**

2005 - 2006: Microwave assisted synthesis of heterocyclic compounds. Department of Chemistry, University of Calicut, Kerala, India. (M Phil work)

Advisor: **Professor K K Vijayan.**

Academic background

First rank in PSC exam for the selection of Assistant Professor of Chemistry, in collegiate education (MSc, NET qualification).

First rank in PSC exam for the selection of Chemical assistant, in Groundwater department (MSc qualification).

Second rank in PSC exam for selection of Non-vocational teacher in Vocational Higher Secondary Education, (MSc qualification).

Qualified **UGC-JRF** in 2006

Qualified **SET Kerala** in 2006

Secured above 90% in **GATE** 2005

November, 2006 - September 2011: UGC-JRF (2 years) and SRF (3 years), Organic Chemistry

Work done at Department of Chemistry, Madurai Kamaraj University, Madurai, 625021, Tamilnadu, India.

2004 - 2006: M Phil., Organic Chemistry,

Department of Chemistry, University of Calicut, Calicut, India.

2002 – 2003: BEd, in Physical Science from Farook Training College Kozhikode with first class (above 60%).

2000 - 2002: M. Sc., in Chemistry, First class, (above 70%).

St. Joseph's College Devagiri, Kozhikode

1997 - 2000: B. Sc., in Chemistry, First class, (above 80%).

St. Joseph's College Devagiri, Kozhikode.

1995 - 1997: Pre Degree, First class, (above 60%).

St. Joseph's College Devagiri, Kozhikode.

1995: SSLC, Distinction, (above 80%).

St. Sebastian's High School Koodaranhi, Kozhikode.

Technical Skills:

- Well versed in applying spectroscopic techniques like NMR, IR, UV-Visible, GCMass, LC-MS spectrometry, X- ray, CHNS-Elemental analyser *etc*.
- NMR (Bruker 300 & 400 MHz) using TMS (Tetramethylsilane as internal standard)
- GC-Mass (Finnigan Trace GC-MS)
- LC-MS (Thermo fisher).
- JASCO FT-Infrared (JASCO FT IR 410 in the range 400-4000 cm^{-1}); Perkin-Elmer
- UV-Vis (Schimadzu UV-Visible double beam spectrophotometer (UV-160) in the range 400-1100 nm/Agilent 8453 UV-Visible spectrophotometer)
- Microwave Synthesizer (Biotage/CEM), initial stage used domestic Mw oven IFB
- CHNS elemental analyser (Perkin-Elmer) using acetanilide as standard.
- Thin layer chromatography (TLC) and preparative scale.
- Column chromatography (silica gel 60-120 mesh also flash), using different diameter and length column.
- Aware of MS Office, Chemdraw, ACD Lab and computer-based literature research technique (Sci-finder).

Work Skills:

- Experience in modern synthetic protocols, including multi-step organic synthesis, microwave assisted synthesis, multicomponent reactions (MCR's) by green chemical protocol (Eco-friendly).
- Conducted team and independent research on the synthesis of medicinally important compounds.
- Biological studies like antibacterial, antifungal and anti-tubercular activity.
- Acquired skill in conducting various reactions involving special conditions like low temperature, inert atmosphere and sensitive reagents.
- Well versed in purification techniques like silica gel column and thin layer chromatography *etc*.
- Co-guidance for Master's, M. Phil and Ph. D student's research projects in my group.

List of Publication

1. Microwave assisted stereoselective 1,3-dipolar cycloaddition of *C*,*N*-diaryl nitrone and bis(arylmethylidene)acetone: NMR and crystal analysis of the diastereoisomeric bis(isoxazolidines) **Nidhin Paul**, Selvam Kaladevi and Shanmugam Muthusubramanian. ***Helvetica Chimica Acta*** 2012, 95, 173.
2. A green protocol for the synthesis of conformationally rigid sulfur linked bisquinolines by double Friedlander reaction in water **Nidhin Paul**, Shanmugam Muthusubramanian and Nattamai Bhuvanesh. ***New Journal of Chemistry*** 2011, *35,* 2607.
3. Domino Vilsmeier-Haack/ring closure sequences: A facile synthesis of 3-chloro benzo[*b*] thiophene-2-carbaldehydes **Nidhin Paul** and Shanmugam Muthusubramanian. ***Tetrahedron Letters*** 2011, *52*, 3743.
4. Synthesis of 2,5-diaroyl-3-arylthiophenes. Novel tandem reactions mediated [3 + 2]-self annulation of bis(aroylmethyl)sulfides. Gurusami Ravindran, **Nidhin Paul**, Shanmugam Muthusubramanian and Subbu Perumal. ***Journal of Sulfur Chemistry*** 2008, *29*, 575.
5. Reaction of diphenacylanilines with 2-aminobenzophenone: An abnormal Friedlander reaction yielding indoles **Nidhin Paul** and Shanmugam Muthusubramanian. ***Synthetic Communications*** DOI**:**10.1080/00397911.2011.627524.
6. A facile microwave-assisted Michael addition of diphenacyl sulfides to chalcones under solvent-free conditions: Generation of symmetrical and unsymmetrical 1,5-diketones **Nidhin Paul**, Muniyappapillai Jeganathan Shanmugam and Shanmugam Muthusubramanian. ***Synthetic Communications*** 2013, 43, 129.
7. A facile synthesis of carbocycle-fused mono and bis-1,2,3-selenadiazoles and their antimicrobial and antimycobacterial studies Selvam Chitra, **Nidhin Paul**, Shanmugam Muthusubramanian, Paramasivam Manisankar, Perumal Yogeeswari and Dharmarajan Sriram. ***European Journal of Medicinal Chemistry*** 2011, *46*, 5465.
8. Spectral analysis and crystal structures of 4-(4-methylphenyl)-6-phenyl-2,3,3a, 4-tetrahydro-1*H*-pyrido[3,2,1-*jk*]carbazole and 4-(4-methoxyphenyl)-6-phenyl-2,3,3a,4-tetrahydro-1*H*-pyrido[3,2,1-*jk*]carbazol e - J. Kalyana Sundar, S. Natarajan, S. Chitra, **Nidhin Paul**, P. Manisankar, S. Muthusubramanian and J. Suresh. ***ISRN Organic Chemistry*** 2011, Article Number 541082.
9. Synthesis of 3-heteroarylthioquinoline derivatives and their in vitro antituberculosis and cytotoxicity studies - Selvam Chitra, **Nidhin Paul**, Shanmugam Muthusubramanian, Paramasivam Manisankar, Perumal Yogeeswari and Dharmarajan Sriram. ***European Journal of Medicinal Chemistry*** 2011, *46*, 4897.
10. A facile, water mediated, microwave-assisted synthesis of 4,6-diaryl-2,3,3a,4-tetrahydro-1*H*-pyrido[3,2,1-*jk*]carbazoles by a domino Fischer indole reaction–intramolecular cyclization sequence - Selvam Chitra, **Nidhin Paul**, Shanmugam Muthusubramanian and Paramasivam Manisankar. ***Green Chemistry*** 2011, *13*, 2777.

11. Solvent based selectivity in the synthesis of di(2-aryl-1*H*-3-indolyl) sulfides and 1-aryl-2-[(2-aryl-1*H*-3-indolyl)sulfanyl]-1-ethanones Selvam Chitra, **Nidhin Paul**, Shanmugam Muthusubramanian and Paramasivam Manisankar ***RSC Advances*** 2012, *2*, 1432.
12. Camphorsulphonic acid catalysed facile tandem double Friedlander annulation protocol for the synthesis of phenoxy linked bisquinoline derivatives and discovery of antitubercular agents **Nidhin Paul**, Muthuchamy Murugavel, Shanmugam Muthusubramanian and Dharmarajan Sriram ***Bioorganic & Medicinal Chemistry Letters*** 2012, *22*, 1643.
13. One-pot greener protocol for the synthesis of substituted coumarins. Choorikkat Ranjith, **Nidhin Paul** and K. K. Vijayan. ***Asian Journal of Chemistry*** 2011, *23*, 235.
14. Temperature dependant product selectivity in Vilsmeier-Haack reaction on bis-phenyl hydrazone of diaroyl sulfide: Synthesis of 3-aroylindoles **Nidhin Paul** and Shanmugam Muthusubramanian (***Helvetica Chimica Acta***, 2013, 96, 452).
15. Synthesis of oxathiane and morpholine from acyclic precursors: a modified Mitsunobu reaction, **Nidhin Paul**, Selvam Kaladevi, Arockiam Jesin Beneto, Shanmugam Muthusubramanian, Nattamai Bhuvanesh, ***Tetrahedron*** 2012, *68*, 6892.
16. Reactions of diphenacylaniline and diphenacyl sulphide under Gewald conditions: generation of enamines and thioamides. **Nidhin Paul**, Ramalingam Sathishkumar, Chellathurai Anuba and Shanmugam Muthusubramanian (***RSC Advances*** 2013, 3, 7445).
17. Synthesis of unsymmetrical (1,3-diarylimidazolidin-4-yl) (aryl)methanone via Mannich reaction. Selvam Kaladevi, **Nidhin Paul**, Shanmugam Muthusubramanian, Subbiah Sivakolunthu (Tetrahedron Letters 54 (2013) 3702–3705)
18. Synthesis, antimicrobial, antitubeculosis and cytotoxicity studies of novel sulphur linked quinoline-coumarin bisheterocycles. **Nidhin Paul**, Shanmugam Muthusubramanian and Dharmarajan Sriram (Accepted in Medicinal Chemistry Research).

Academic references

1. **Prof. Dr. Shanmugam Muthusubramanian**

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2. **Senior Prof. Dr. Subbu Perumal**

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3. **Prof. Dr. Alagusundaram Ponnusamy**

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