

CURRICULUM VITAE

Dr. Ramprakash Venkatesan

D.O.B: 16/09/1983

Email: ramcya0315@gmail.com

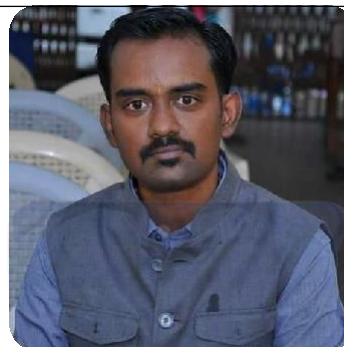
Nationality Indian

Mobile:(+91)7227016866

Gender: Male

Languages known: English, Hindi, Tamil, Telugu

Linkedin: www.linkedin.com/in/ramprakash-venkatesan-8749b1165



PROFILE SUMMARY

Seeking challenging and growth oriented position to utilize my industrial/academic research experience skills to organic chemistry, synthetic/medicinal chemistry or else in any other appropriate scientific disciplines.

ACADEMIC PROFILE

2020-Till date DS Kothari Post doctoral fellow in Organic synthesis.

Institute : Pondicherry University, Pondicherry, India.

Project Title : Total synthesis of Natural Products.

2013-2015 Postdoctoral Research Associate in Organometallic Chemistry

Institute : Indian Institute of Technology, (IIT) Indore, India

Project Title : Studies of certain thiocarboxylate based ligands and their metal complexes

2009-2012 PhD in Organic Chemistry

Institute : Universidade Federal de Rio Grande do Sul (UFRGS), Brazil.

Thesis Title : Selective hydrogenation of triple bonds with metal nanoscale catalysts.

2003-2005 M.Sc., in Organic Chemistry (First Class)

Institute : National Institute of Technology, (NIT), Trichy, Tamilnadu, India.

Thesis title : Synthesis of fluoro intermediates for the bio active molecules. (NCL, Pune)

2000-2003 B.Sc., in Chemistry (First Class)

Institute : Bharathidasan university, Trichy, Tamilnadu, India.

AWARDS AND FELLOWSHIPS

- **2019 DS Kothari postdoctoral fellowship** (India).
- **2013-2015 CSIR Research Associateship** (India).
- **2009-2012 International research fellowship** awarded by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brazil & The Academy of Sciences for the Developing World (TWAS), Trieste, Italy to pursue PhD (2009-2012).

PROFESSIONAL EXPERIENCE

- 1) **October, 2015 – December, 2019** Senior Researcher (API – Generic R& D), Cadila Healthcare Limited., Vadodara, India.

Roles and Responsibilities:

- ✓ Literature search for the Synthesis of impurities observed during APIsynthesis.
- ✓ Guiding subordinates during reaction monitoring.
- ✓ Coordinating with seniors regarding planning of experiments.
- ✓ Raw materials indenting and arrangement for the Synthesis of impurities
- ✓ Synthesis of impurities, intermediates and API standards
- ✓ Confirmation of synthesised impurities by spectral analysis
- ✓ Preparation of Monthly presentations.
- ✓ Documentation as per SOP to maintain safety
- ✓ Review of Batch Manufacturing Records.
- ✓ Review of Product Development Records.
- ✓ Review of Structure Elucidation and Characterisation Reports.
- ✓ Review of Investigation Reports.

- 2) **2007-2009** Research Executive (New Drug Discovery – Medicinal Chemistry), Orchid Research Laboratories Limited, Chennai, India.

Roles and Responsibilities:

- ✓ Literature search for the Synthesis of New Chemical Entities (NCEs)
- ✓ Synthesis of New Chemical Entities (NCEs)
- ✓ Confirmation of synthesised New Chemical Entities (NCEs) by spectral analysis
- ✓ Documentation as per SOP to maintain safety

- 3) **2006-2007** Research Chemist (New Drug Discovery – Medicinal Chemistry), Ranbaxy Research Laboratories Limited, Gurgaon, India.

Roles and Responsibilities:

- ✓ Literature search for the Synthesis of New Chemical Entities (NCEs)
- ✓ Synthesis of New Chemical Entities (NCEs)
- ✓ Confirmation of synthesised New Chemical Entities (NCEs) by spectral analysis
- ✓ Documentation as per SOP to maintain safety

- 4) **2005-2006** Junior Research Associate (Chemoinformatics), Molecular Connections Pvt Ltd., Bangalore, India.

Roles and Responsibilities:

- ✓ Deriving chemical structures from chemical names and updation of the same in database.
- ✓ Quality checking of the structures maintained in the database.

RESEARCH EXPERIENCE

- ❖ Excellent lab skills in setting up tedious highly moisture sensitive, temperature dependent reactions which require high expertise in handling of extremely toxic chemicals and solvents, monitoring of reaction using thin layer chromatography, followed by purification of compounds using column chromatography.
- ❖ Experienced in the synthesis of ionic liquids and ionic liquid mediated organic transformations, synthesis of Organometallic Complexes, Coordination Polymers.
- ❖ Strong hand in multistep synthesis of biologically relevant compounds on mg level as well as gram scale.
- ❖ Experienced in handling GC-MS and HPLC instruments.
- ❖ Characterization of final compounds with ^1H NMR, ^{13}C NMR, DEPT and 2D NMR (which includes COSY, HETCOR), HRMS and IR spectroscopic techniques.
- ❖ Strong background knowledge in synthesis and functionalization of indole and related heterocyclic scaffolds.
- ❖ Strong hand in the synthesis of nanoparticles.
- ❖ Strong skills in writing international research articles as well as replies to the questions raised by reviewers.
- ❖ Good at handling scientific software like Sci finder, Scopus, Reaxys, Chem Draw, Chem Office 12.0, ISIS Draw & Base etc., and capable of analyzing the experimental data statistically by computational methods.

PUBLICATIONS

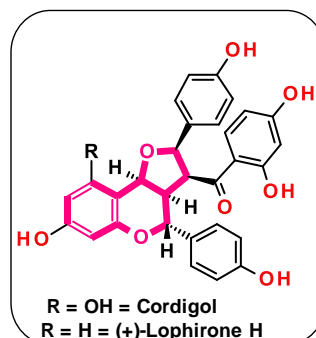
1. **Venkatesan, R.** ; Prechtel, M. H. G. ; Scholten, J. D. ; Pezzi, R. P. ; Machado, G. ; and Dupont, J. Palladium nanoparticle catalysts in ionic liquids: synthesis, characterisation and selective partial hydrogenation of alkynes to Z-alkenes, *J. Mater. Chem.*, 2011, 21, 3030-3036 Impact Factor: 6.626
2. Mobin, S. ; **Venkatesan, R.** ; Mohammed, A. ; Saini, A. K. New Tetrathioterephthalate bridged coordination polymer of six-coordinate sodium complex: synthesis, crystal structure, photophysical, thermal and electro chemical properties, *cryst engg comm.*, *Under Preparation*
3. **Venkatesan, R.** ; Mohammed, A. ; Saini, A. K. ; Mobin, S. Tetrathioterephthalate Bridged Zigzag Chain of Six-Coordinate Sodium Complex: Synthesis, Crystal Structure, Photophysical, Thermal and Electro Chemical Properties. International Congress on Computer, Electronics, Electrical, and Communication Engineering, Chennai, 2014.
4. Prechtel, M. H. G. ; **Venkatesan, R.** ; Scholten, J. D. ; Pezzi, R. ; Machado, G. ; Teixeira, S. R. ; Dupont, J. : Synthesis and Properties of Metal Nanoparticles in Ionic Liquids. In: "Metal Nanoparticles in Catalysis" - Proceedings of the Post Symposium of ISHC-17, Wroclaw/Poland, 9-11 July 2010; ISBN-13: 978-83-60043-25-7. (Ed. Anna Trzeciak) Wroclaw, Poland: University of Wroclaw, 2010, p. 49 - 49 [ruthenium, palladium, nanoparticles, ionic liquids, catalysis, hydrogenation].

Abstract of Post Doctoral Research Work

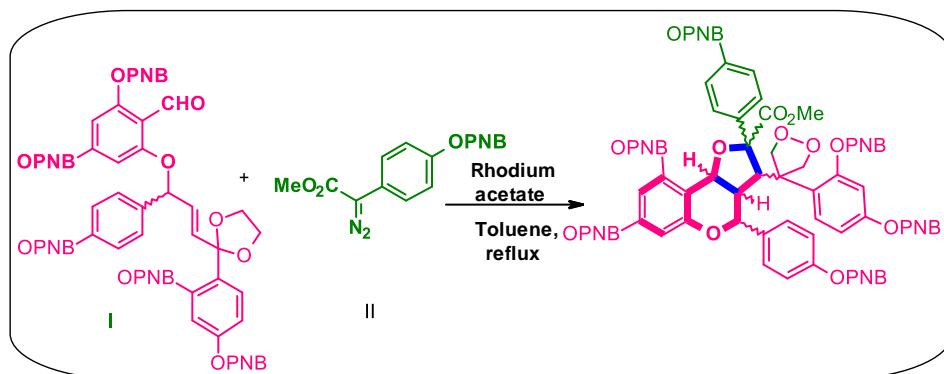
Pondicherry University, Pondicherry, India (December, 2019 - till date)

Total synthesis of Cordigol and Lophirone-H (Unpublished Results)

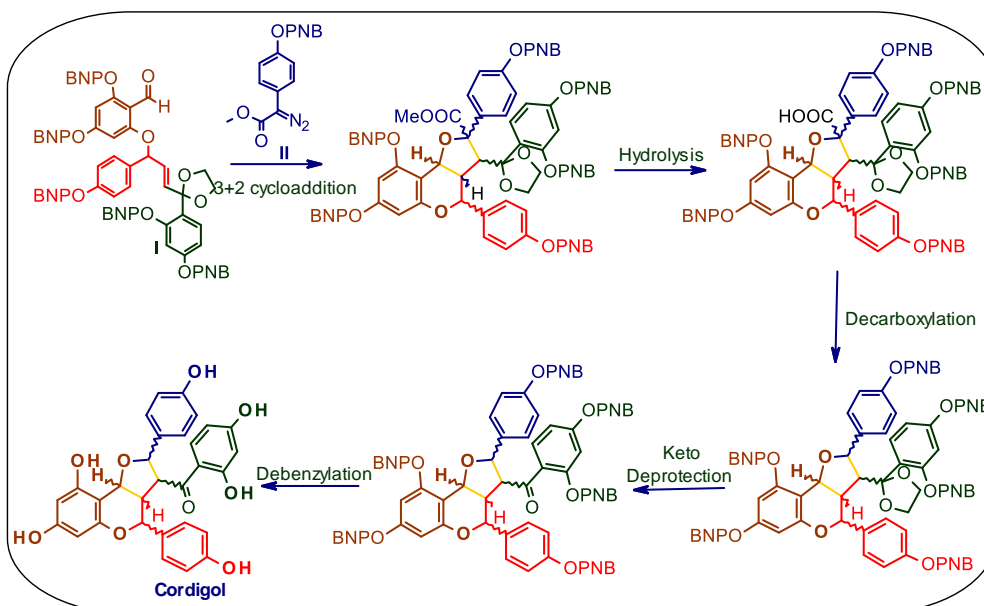
- ✓ Furanochromene / furanoquinoline heterocycles are privileged structural motifs, and their derivatives are endowed with potential medicinal properties.
- ✓ Cordigol, shows antifungal activity.
- ✓ Further, lophirone, exhibits a wide range of biological activities such as analgesic, anticancer and anti inflammatory activities.



Key step for synthesizing Cordigol utilizing [3+2] cycloaddition strategy:

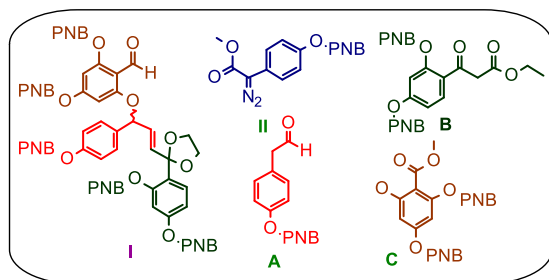


ROS for synthesizing Cordigol

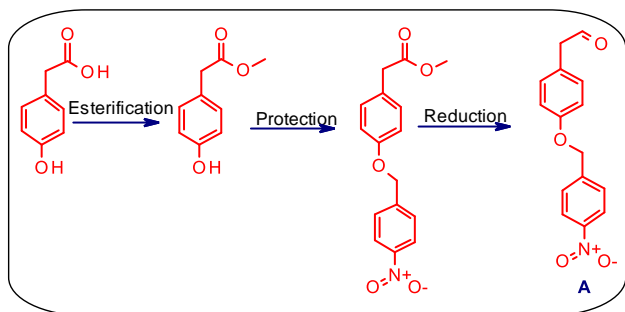


Starting material synthesis

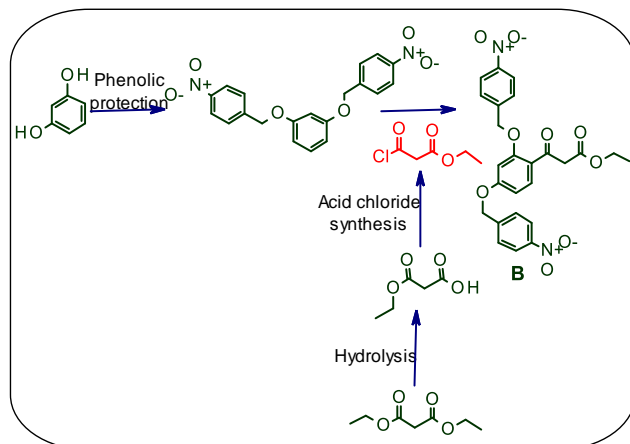
Structures of starting materials



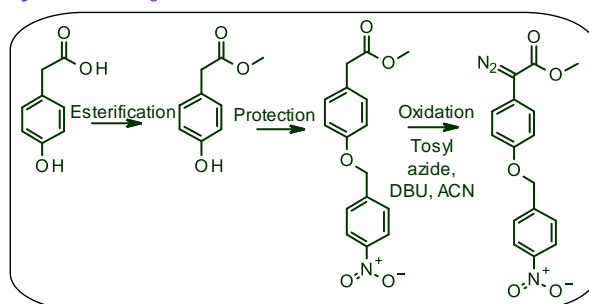
Synthesis of A



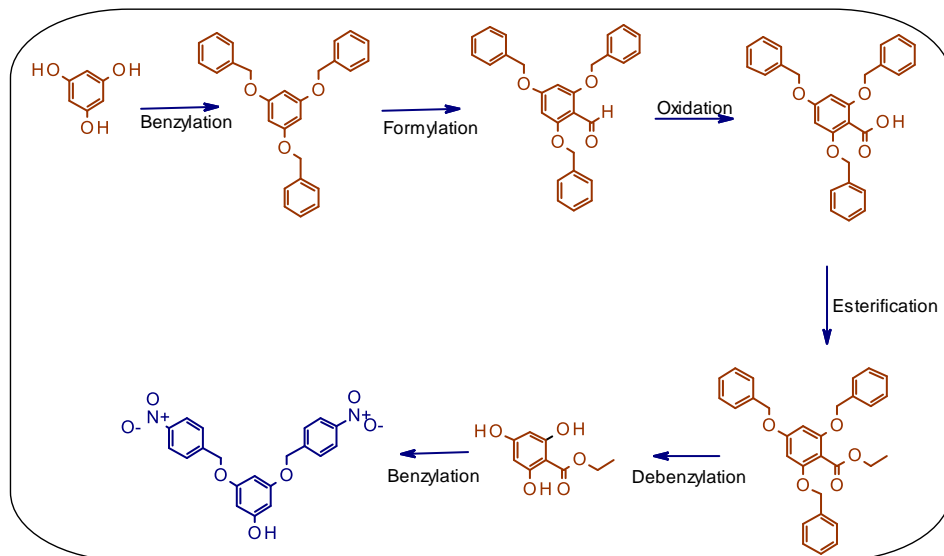
Synthesis of B



Synthesis of II



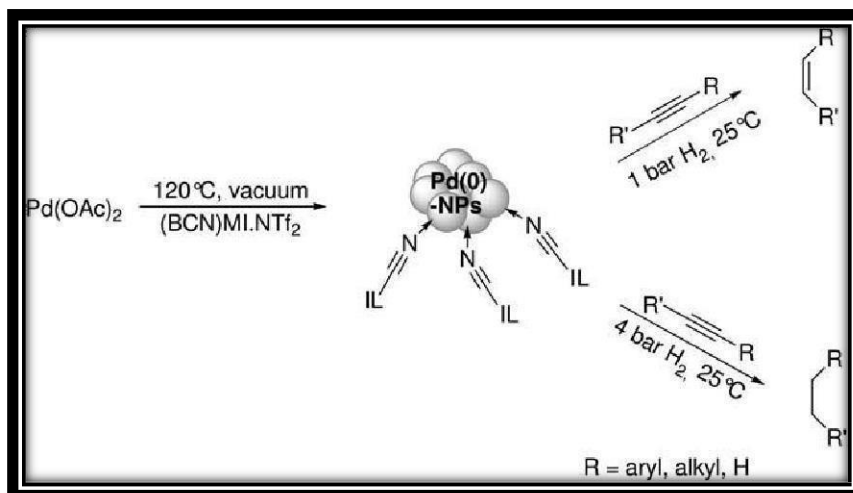
Synthesis of C



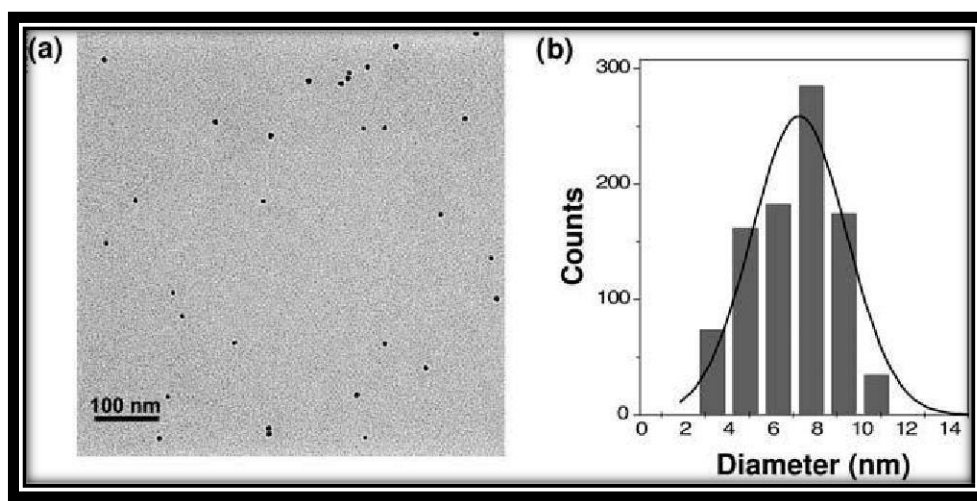
Abstract of Ph.D., Research Work

Partial hydrogenation of alkynes in liquid–liquid biphasic systems with Pd(0)-NPs in ILs
(Published in Journal of Material Chemistry)

The selective partial hydrogenation of alkynes to cis-alkenes represents an important class of chemical transformations that have found extensive use in the construction of an enormous variety of, for example, bioactive molecules, natural products, industrial materials. We now disclose a development of very practical catalyst and an efficient partial hydrogenation controlled by the catalyst activity that overcomes serious and longstanding problems.



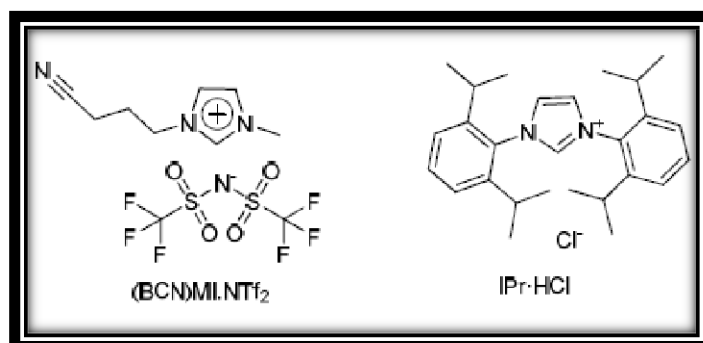
Hydrogenation of alkynes with Pd(0)-NPs in IL.



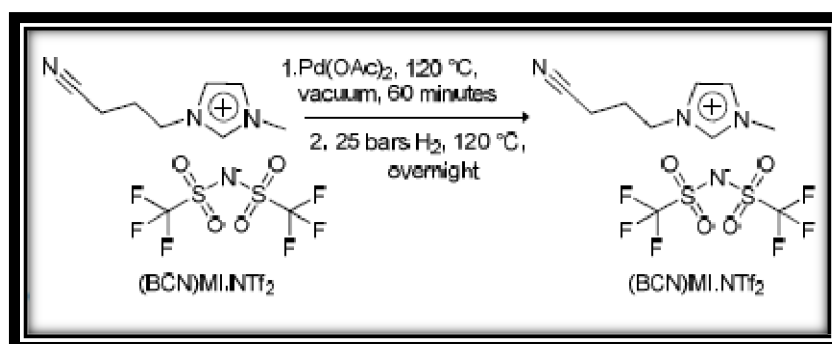
(a) Selected TEM image of Pd(0)-NPs dispersed in $(\text{BCN})\text{MI.NTf}_2$ and (b) the histogram showing the particle size distribution of Pd(0)-NPs dispersed in $(\text{BCN})\text{MI.NTf}_2$. The particles display an irregular shape with a monomodal particle size distribution of 7.3 ± 2.2 nm.

Hydrogenation of nitriles in biphasic systems with Pd(OAc)₂ in Ionic Liquids
(Unpublished results)

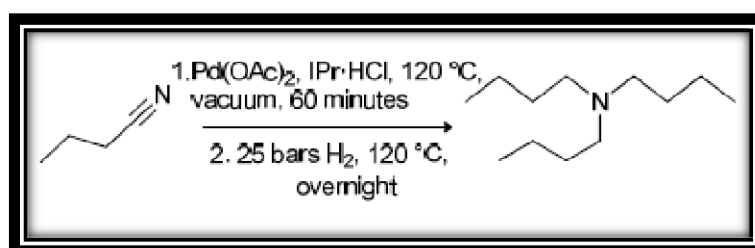
(BCN)MI.NTf₂ (1-butyronitrile-3-methylimidazolium-*N*-bis(trifluoromethanesulfonyl) imide) and IPr·HCl (1,3-bis-{2,6-diisopropylphenyl}imidazolium chloride) were synthesized and their properties for nitrile hydrogenation were verified.



Formulae of imidazolium salts used in the study.



Hydrogenation of imidazolium salt (1-butyronitrile-3-methylimidazolium-*N*-bis(trifluoromethanesulfonyl) imide (BCN)MI.NTf₂)



Hydrogenation of butyronitrile with IPr·HCl (1,3-bis-{2,6-diisopropylphenyl}imidazolium chloride)

Pd(OAc)₂ in (1,3-bis-{2,6-diisopropylphenyl}imidazolium chloride) was heated at 120 °C for overnight in Fischer–Porter bottle and same palladium acetate in (1,3-bis-{2,6-diisopropylphenyl}imidazolium chloride) was heated at 120°C for 60 minutes in round round-bottomed flask and their TEM images have been recorded.