




DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT
22 Mile, B.M Kaval, Udayapura, Kanakapura Road, Bangalore-560082.

DEPARTMENT OF CHEMISTRY

Faculty Name	Dr. Senthil Narayanaperumal	
Designation	Associate Professor & HOD	
Educational Qualification	M.Sc., PhD	
Experience in Years	13.6	
Area of Interest	Synthetic Organic Chemistry, Ionic Liquids, Synthesis of Organo- chalcogen molecules.	
Email ID	Senthil_nit2003@yahoo.com	

Educational Details

- Ph.D in Synthetic Organic Chemistry, Universidade Federal de Santa Maria – (UFSM), Santa Maria, Brazil
- MSc in Applied Chemistry, National Institute of Technology (NIT), Tiruchirappalli, India
- BSc in Chemistry, Manonmaniam Sundaranar University, Tirunelveli, India.

Personal Details

- Date of Birth: 15-10-1981
- Hobbies: Reading books and Listening to music
- Languages Known: Tamil, English, Portuguese

Professional Experience

- Working as Associate Professor & HOD in Chemistry at Dayananda Sagar Academy of Technology and Management, Bangalore from 2019 to till Date.
- Worked as Research Investigator in Organic Chemistry at Universidade Federal de São Carlos (UFSCär) São Paulo, Brazil from 2017 to 2018.
- Worked as Specialist Researcher in Chemical Synthesis – API Process R&D at Cristalia Pharmaceutical Ltd, São Paulo, Brazil from 2014 to 2017.
- Worked as Postdoctoral Research Associate in Organic Chemistry at Universidade Federal de Rio Grande do Sul - (UFRGS) Porto Alegre, Brazil from 2013 to 2014.
- Worked as Postdoctoral Research Associate in Organic Chemistry at Universidade Federal de São Carlos (UFSCär) São Paulo, Brazil from 2011 to 2013.
- Worked as Scientist in Process Research & Development (PRD) Biocon Limited, Bangalore, India from 2007 to 2008.
- Worked as Research Assistant in Synthetic Organic Chemistry at Regional Research Laboratory (RRL-CSIR), Kerala, India from 2006 to 2007.
- Worked as Junior Research Associate (Quality Checking & maintenance of the project) Molecular Connections Pvt Ltd, Bangalore, India from 2005 to 2006.

Publications

International Journals:

- Ionic liquid: an efficient and recyclable medium for synthesis of unsymmetrical diorganyl selenides promoted by InI.
Senthil Narayanaperumal, E. E. Alberto, E.J. Lenardão, A. L. Braga,
Organic & Biomolecular Chemistry, 2009, 7, 4647–4650.
[Impact Factor: 3.696]
- Synthesis of diorganyl selenides mediated by Zinc in ionic liquid.
Senthil Narayanaperumal, E.E. Alberto, K. Gul, O.E.D. Rodrigues, A. L. Braga
Journal of Organic Chemistry, 2010, 75, 3886–3889.
[Impact Factor: 4.849]
- Efficient synthesis of selenoesters from acyl chlorides mediated by CuO nanopowder in ionic liquid
D. Singh, Senthil Narayanaperumal, K. Gul, M. Godoi, O. E. D. Rodrigues, A. L. Braga
Green Chemistry, 2010, 12, 957–960.
[Impact Factor: 9.125]
- Transition-metal oxide nanopowder and ionic liquid: an efficient system for the synthesis of diorganyl selenides and β -seleno amines.
Senthil Narayanaperumal, K. Gul, C. Y. Kawasoko, , O. E. D. Rodrigues, A.L. Braga
Journal of Brazilian Chemical Society, 2010, 21, 2079-2087.
Invited Article for Special Issue*
[Impact Factor: 1.434]
- Zn in ionic liquid: an efficient reaction media for the synthesis of diorganyl selenides, sulfides, seleno- and thioesters.
Senthil Narayanaperumal, K. Gul, C. Y. Kawasoko, O. E. D. Rodrigues, A.L. Braga
Tetrahedron, 2011, 67, 4723-4730.
[Impact Factor: 3.060]
- Bimetallic system for the synthesis of diorganyl selenides and sulfides, chiral β -seleno amines, and seleno- and thioesters.
K. Gul, Senthil Narayanaperumal, L. Dornelles, O. E. D. Rodrigues, A.L. Braga,
Tetrahedron Letters, 2011, 52, 3592–3596.
[Impact Factor: 2.683]
- Synthesis of chiral β -chalcogen amine derivatives and gram-positive bacteria activity.
J. Vargas, Senthil Narayanaperumal,* K. Gul, L. Dornelles, O. E. D. Rodrigues*
Tetrahedron, 2012, 68, 10444-10448.
Invited Article for Special Issue*
[Impact Factor: 3.060]
- CuO nano particles and [bmim]BF₄: an application towards the synthesis of chiral- β -seleno amino derivatives via ring opening reaction of aziridines with diorganyl diselenides
S. M. Salman, Senthil Narayanaperumal, R. S. Schwab, O. E. D. Rodrigues, L. Dornelles
RSC Advances, 2012, 2, 8478–8482.
Invited Article from RSC*
[Impact Factor: 3.108]
- Structural modulation of diorganoyl dichalcogenides reactivity by non-bonded nitrogen interactions
W. Hassan,* Senthil Narayanaperumal, A. L. Braga, O. E. D. Rodrigues, J. B. T. Rocha
Chemico-Biological Interactions, 2012, 199, 96-105.
[Impact Factor: 3.060]

- Understanding the mechanism of antioxidant potential of organochalcogens in rat's brain Preparation.
W. Hassan, * Senthil Narayanaperumal, I.A. L. Braga, O. E. D. Rodrigues, J. B. T. Rocha
Pharmaceutica Analytica Acta, 2013, S3:002. (DOI: 10.4172/2153-24 35.S3-002)
- Iron (III) chloride catalyzed glycosylation of peracylated sugars with allyl/alkynyl alcohols.
Senthil Narayanaperumal, R. C. Silva, A. G. Corrêa, M. W. Paixao
Journal of Brazilian Chemical Society, 2012, 23, 1982-1988.
[Impact Factor: 1.434]
- Basic-functionalized recyclable ionic liquid catalyst: a solvent-free approach for Michael addition of 1,3-dicarbonyl compounds to nitroalkenes under ultrasound irradiation
Senthil Narayanaperumal,* R. C. Silva, A. Fernandez, A. G. Corrêa, M. W. Paixao
Ultrasonics Sonochemistry, 2013, 20, 793-798.
[Impact Factor: 4.218]
- Terpene based bifunctional thioureas in asymmetric organocatalysis.
Senthil Narayanaperumal, D. G. Rivera, R. C. Silva, M. W. Paixao
ChemCatChem, 2013, 5, 2756-2773
[Impact Factor: 5.207]
- An Eco-Friendly Asymmetric Organocatalytic Conjugate Addition of Malonates to α,β -Unsaturated Aldehydes: Application on the Synthesis of Chiral Indoles
K. S. Feu, A. M. Deobald, Senthil Narayanaperumal, A. G. Corrêa, M. W. Paixão
European Journal of Organic Chemistry, 2013, 26, 5917-22
[Impact Factor: 4.450]
- Substituent, structural and positional isomerisation alter anti-oxidant activity of organochalcogen compounds in rats' brain preparations
Waseem Hassan *, Senthil Narayanaperumal, A. L.Braga, J.B. T. da Rocha
Arabian Journal of Chemistry, 2014 (<http://dx.doi.org/10.1016/j.arabjc.2014.10.045>)
[Impact Factor: 4.553]

Conferences:

- Quantum mechanical, in vitro and in vivo evidence of the involvement of non-bonding nitrogen interactions in valine derived β -amino chalcogenides
W. Hassan, * Senthil Narayanaperumal, K. Gul, R. De Aquino Saraiva, J. B.T. da Rocha
Current Opinion in Biotechnology, 2013, 24, 1, s112
- Quantum mechanical, in vitro and in vivo evidence of the involvement of non-bonding nitrogen interactions in valine derived β -amino chalcogenides
W. Hassan, * Senthil Narayanaperumal, K. Gul, R. De Aquino Saraiva, J. B.T. da Rocha
Toxicology Letters, 2013, 221, s172-s173
- "Basic-functionalized recyclable ionic liquid catalyst: A solvent-free approach for Michael addition of 1,3-dicarbonyl compounds to nitroalkenes under ultrasound irradiation" (**Invited Lecture**) presented in 4th International IUPAC Conference on Green Chemistry held at Foz do Iguaçu/PR, Brazil (25–29 August 2012).
- Base-behaviour Ionic Liquid: a Recyclable Reaction Media For the Michael Addition of 2,4-Dicarbonyl Compounds to Nitroalkenes under Ultrasonication.
Presented in 4th International IUPAC Conference on Green Chemistry, 2012, Foz do Iguaçu. 4th International IUPAC Conference on Green Chemistry, 2012.
Senthil Narayanaperumal K. S. Feu, A.F.L. Torre, A.G. Correa, M.W. Paixao.
- "Iron (III) chloride catalyzed glycosylation of sugars with allyl/alkynyl alcohols" presented in 4th International IUPAC Conference on Green Chemistry held at Foz do Iguaçu/PR, Brazil (25–29 August 2012).
Senthil Narayanaperumal, J.Monteiro, J. L., A.G. Correa, M.W. Paixao.

- Presented “Synthesis of Organochalcogen derivatives mediated by ionic liquid in the “III Encontro sobre Selênio e Telúrio – Brasil (III ESeTe–Brasil)” organized by the Department of chemistry, Federal University of Santa Catarina- UFSC, Brazil (Nov 29 to 02 December, 2010).
O.E.D Rodrigues, Senthil Narayanaperumal A.L. Braga, C.Y. Kawasoko, P. Foletto
- Presented “Synthesis of diorganyl selenides mediated by Zn in ionic liquid” in the “III Encontro sobre Selênio e Telúrio – Brasil (III ESeTe–Brasil)” organized by the Department of chemistry, Federal University of Santa Catarina- UFSC, Brazil (Nov 29 to 02 December, 2010).
L. Dornelles, Senthil Narayanaperumal, E.E. Alberto, H. Elisiane.
- Presented “Synthesis of Selenoesters from Acyl Chlorides Mediated by CuO Nanopowder in Ionic Liquid” in the “III Encontro sobre Selênio e Telúrio – Brasil (III ESeTe–Brasil)” organized by the Department of chemistry, Federal University of Santa Catarina- UFSC, Brazil (Nov 29 to 02 December, 2010).
A.L. Braga, Senthil Narayanaperumal, O.E.D. Rodrigues, J. Vargas, D. Singh, B. Martins
- Presented “Synthesis of chiral β -Seleno amino derivatives using Zn in Ionic Liquid” in the “III Encontro sobre Selênio e Telúrio – Brasil (III ESeTe–Brasil)” organized by the Department of chemistry, Federal University of Santa Catarina- UFSC, Brazil (Nov 29 to 02 December, 2010).
A. L. braga, Senthil Narayanaperumal, S. Slaman, O.E.D. Rodrigues, D. Caroline
- Presented “Transition metal oxide Nanopowder Catalyzed Efficient Cross-Coupling Reaction of Diaryl Diselenides with Aryl Halides using Zn in Ionic Liquid” in the “33a Reunião Annual da Sociedade Brasileira de Quimica” organized by the Department of Chemistry, University of São Paulo, Brazil (May 28-31, 2010).
Senthil Narayanaperumal, O.E.D. Rodrigues, A.L. Braga, C.Y. Kawasoko, P. Foletto.
- Delivered a lecture titled “Organic Reactions on Silica in Water” organized by the Department of chemistry, Universidade Federal de Santa Maria– (UFSM), Brazil on 12th April 2010
- Presented “Ionic Liquid: an Efficient and Recyclable Media for Synthesis of Unsymmetrical Diorganyl Selenides Promoted by InI” in the “13th Brazilian Meeting on Organic Synthesis 2009” organized by the Department of chemistry, University of Sao Paulo, Brazil (31st August-4th Sep 2009). Senthil Narayanaperumal, E.J. Lenardão, A.L.braga. p. 163-163.
- Presented “Efficient Synthesis of Selenolanthionines: LiAlHSeH as Selenating Reagent in Aziridine Ring Opening Reactions” in the “13th Brazilian Meeting on Organic Synthesis 2009” organized by the Department of chemistry, University of Sao Paulo, Brazil (31st August-4th Sep 2009). Fabio Z Galetto, Senthil Narayanaperumal, E.J. Lenardão, A.L.braga. p. 170-170.
- “A novel ring opening reaction of epoxides With 1,3- dipoles” (**Invited Lecture**) presented in the Department of chemistry, Universidade Federal de Pelotas – (UFPel), Pelotas, Brazil on 1st August 2008.
- Presented a paper in “Materials for the millennium-2007” a international conference held at Department of chemistry, University of science and Technology, Kochi, India during march1-3; 2007.
- Participated and presented a paper in the two day national seminar on “Frontiers in Organic Chemistry 2007” organized by the Department of chemistry University of Calicut, Kerala, India (11 &12 -01-2007).

Awards

- **2013:** “**STS Future Leaders-2013**” awarded by Japan Society for the Promotion of Science (**JSPS**) & the New York Academy of Sciences (**NYAS**) in Kyoto, **Japan** (5-8 October, 2013).
- **2013-2014** International research fellowship awarded by **CAPES, Brazil**
- **2011-2013** International Young Researchers fellowship awarded by **FAPESP, Brazil**.
- **2008-2010** International research fellowship awarded by Conselho Nacional de Desenvolvimento Cientific e Tecnológico (**CNPq**) & The Academy of Sciences for the Developing World Trieste, **Italy** to pursue PhD.

- **2005** : Certificate for successfully completed the project titled "Optical nanofillers - synthesis, characterization and testing" under student projects scheme by Tamil Nadu State Council for Science and Technology (**TNSCST**), Chennai, India.

Academic Activity

- Taught Synthetic Organic chemistry I & II for graduate and Advanced Synthetic Organic Chemistry I & II for post graduate & PhD students at Universidade Federal de São Carlos(UFSCär) São Paulo, Brazil from 2011 to 2013.
- Co-ordinate and attend formal meetings associated with the study. Produce interim and progress reports at UFSCär, Brazil.
- Perform literature reviews to inform study development at UFSCär, Brazil.
- Supervise graduate and postgraduate students. Advice Ph.D., students working on their project, take-part in discussions to reach the targets and supervise their day-to-day laboratory activity at UFSCär, Brazil since 2011-2013 and 2017-2018.
- Taught Organic chemistry practical's for under graduate students at Universidade Federal de Santa Maria – (UFSM), Brazil from 2009 to 2010.

Faculty Development Activity

- Participated in the short-course "**Green Chemistry: Principles and Practice**" presented by **Prof.Dr. Mary Kirchoff** in the 4th International IUPAC Conference on Green Chemistry held in Foz do Iguaçu/PR, Brazil (25–29 August 2012).
- Participated in the short-course "**Solvents, Separations and Renewables**" presented by **Prof. Dr. Robin D. Rogers** in the 4th International IUPAC Conference on Green Chemistry held in Foz do Iguaçu/PR, Brazil (25–29 August 2012).
- Participated in the "IV Escola Superior Em Sintese Organica- IV ESSO" national workshop held at Universidade de São Paulo (USP), São Carlos, Brazil on 06-10.02.2012.
- Participated in the DST sponsored national workshop on "One and two dimensional NMR spectroscopy Theory and Applications" organized by the school of chemistry, Madurai Kamaraj university, Madurai, India during 22& 23-03-2007.
- Participated in the industrial-visit at Cristalia Pharmaceutical Ltd, Itapira, São Paulo, Brazil on 08.02.2012.
- In-Plant trainee at The India Cements Ltd, Sankar Nagar, India from June 09-12, 2004.
- Participated in the seminar on "Emerging Trends in Chemistry" held at Department of Chemistry, National College, Tiruchirappalli, India on 24.01.2004.

Administrative Activity

- International Journal Reviewer of RSC advances, Organic and Biomolecular Chemistry, Green Chemistry, Tetrahedron, Tetrahedron Letters, Ultrasonics Sonochemistry, Catalysis Science & Technology, Journal of Brazilian Chemical Society and Orbital - The Electronic Journal of Chemistry
- Organized a national level student's symposium on "Recent developments in Bioinorganics" (Horizon 2004) on October 1-2, 2004 in the Department of Chemistry, National Institute of Technology, Tiruchirappalli, India.
- Organized a national level student symposium "HORIZON – 2003" in the Department of Chemistry, National Institute of Technology, Tiruchirappalli, India.

Professional Membership

- Member of Brazilian Chemical Society (SBQ), Brazil.
- Member of Brazilian Pharmaceutical employee forum, Brazil.
- Member of STS forum (2013-14), Japan

Contact Details

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My Vision

- To prove and utilize my scientific as well as technical skills in the field of Synthetic Organic Chemistry in a globally competitive environment so as to attain self-reliance in every aspects.
- Development of new organocatalytic approaches to chemical synthesis, using novel reactivity concepts, which allow rapid and stereo-controlled access to natural-product-inspired compound collections with a minimum number of reaction steps, atom-economy, and minimum waste production.