



Faculty Details proforma for DU Web-site

Title	Dr	First Name	Gopalaiah	Last Name	Kovuru	Photograph
Designation	Associate Professor					
Address	Room No.: 3, Block-C Department of Chemistry University of Delhi Delhi-110007, India					
Phone No	Office	+91-11-27666646				
	Residence					
	Mobile	9999330689				
Email	gopal@chemistry.du.ac.in; gopalaiah@gmail.com					
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D (Organic Chemistry)		Indian Institute of Science (IISc), Bangalore			2005	
M.Sc (Organic Chemistry)		Sri Venkateswara University			1998	
B.Sc		Sri Venkateswara University			1996	
Career Profile						
2020 – Present: Associate Professor (Organic Chemistry), University of Delhi, Delhi.						
2010 – 2020: Assistant Professor (Organic Chemistry), University of Delhi, Delhi.						
2009 – 2010: Associate Research Scientist, AstraZeneca India Pvt. Ltd., Bangalore, India.						
2006 – 2008: Post-Doctoral Research (<i>Prof. Henri B Kagan's research group</i>), University of Paris-Sud, France.						
2000 – 2005: Ph.D., Department of Organic Chemistry, Indian Institute of Science (IISc), Bangalore, India.						

Administrative Assignments
<ul style="list-style-type: none"> • Deputy Superintendent for conducting open book examinations-2020 for M.Sc. Chemistry internal assessment and theory examinations (June to September 2020) • Member of selection committee for conducting the Ph.D programme interviews (March 2019) • Member of selection committee for conducting the Ph.D programme interviews (October 2018) • Member of moderation committee for Ph.D course work examinations (March 2018) • Member of selection committee for conducting the Ph.D programme interviews (March 2018) • Member of moderation committee for Ph.D course work examinations (November 2017) • Deputy Superintendent for conducting Ph.D course work examinations (Nov - Dec 2017) • Member of Department research committee (September 2017 - August 2019) • Member of selection committee for conducting the Ph.D programme interviews (Sept. 2017) • Member of moderation committee for Ph.D course work examinations (August 2017) • Convener for Organic Chemistry Section, Department of Chemistry, University of Delhi (July 2017 to June 2018) • Deputy Coordinator for Centralized Evaluation Centre of M.Sc Chemistry II & IV Semesters and M.Tech (CSPT) Theory examinations May 2016 • Member of committee of courses (August 2014) • Deputy Coordinator for Centralized Evaluation Centre of M.Sc. Chemistry I & III Semesters and M.Tech (CSPT) Theory examinations December 2013
Areas of Interest / Specialization
<ul style="list-style-type: none"> ▪ Development of novel synthetic approaches/new chemical reactivity ▪ Metal-catalyzed Cascade/Tandem reactions ▪ C-H bond activation/functionalization ▪ Total syntheses of biologically significant natural and unnatural molecules
Subjects Taught
<p>Paper No. 102 – Course A: <i>Organic Stereochemistry</i> (M.Sc. Semester-I)</p> <p>Paper No. 3201 – Course B: <i>Heterocyclic Chemistry</i> (M.Sc. Semester-III)</p> <p>Paper No. 202 – Course B: <i>Methods in Organic Synthesis</i> (M.Sc. Semester-II)</p> <p>Paper No. 302 – Course A: <i>Photochemistry & Pericyclic Reactions</i> (M.Sc. Semester-III)</p>

Paper No. 601 – Course B: *Green and Sustainable Chemistry* (M.Tech. Semester-VI)
Paper No. 303 – Course A: *Process Development and Important Industries Technologies* (M.Tech. CSPT, Semester-III)
Unit No. 32: *Organic Synthesis* (Ph.D. course)
Paper No. 203 – Course B: *Heterocyclic Chemistry* (M.Tech. CSPT, Semester-II)
Paper No. 101 – Course B: *Stereochemistry* (M.Tech. CSPT, Semester-I)
Paper No. 104: *Practical, Organic Chemistry* (M.Sc. Semester-I)
Paper No. 204: *Practical, Organic Chemistry* (M.Sc. Semester-II)
Paper No. 3202: *Practical, Organic Chemistry* (M.Sc. Semester-III)
Paper No. 4205 & 4206: *Practical and Project Evaluation, Organic Chemistry* (M.Sc. Semester-IV)
Paper No. 205: *Practical* (M.Tech. CSPT, Semester-II)
Paper No. 305: *Practical* (M.Tech. CSPT, Semester-III)
Paper No. 605: *Practical* (M.Tech. CSPT, Semester-VI)

Time table of the subjects taught during the current semester

Paper No. 202 – Course B: *Reagents and Methods in Organic Synthesis* (M.Sc. Semester-II)
Paper No. 204: *Practical, Organic Chemistry* (M.Sc. Semester-II)

Research Guidance

Ph.D. Awarded : 5

Name of the Students: 1) S. N. Chandrudu

2) Alka Devi

3) D. C. Rao

4) Anupama Saini

5) Ankit Tiwari

Publications & Patents

30) Kovuru Gopalaiah, Renu Choudhary

Synthesis of Kröhnke Pyridines through Iron-Catalyzed Oxidative Condensation/Double Alkynylation/Amination Cascade Strategy

Tetrahedron, 2021, 98, 132429.

29) P. Yadav, K. Gopalaiah, V. Shrivastava, R. Nagarajan

Microspherical core-shell MoO₂-graphitic C₃N₄ heterojunction promoted integration leading to Kröhnke pyridines and degradation of xylenol orange

Materials Today Communications **2021**, *26*, 102117.

28) Kovuru Gopalaiah, Ankit Tiwari

Synthesis of (*E*)-3-Alkylideneindolin-2-ones by an Iron-Catalyzed Aerobic Oxidative Condensation of Csp³-H Bonds of Oxindoles and Benzylamines

European Journal of Organic Chemistry **2020**, 7229-7237.

- This article has been selected for the Hot Topics: C-H activation

27) Kovuru Gopalaiah, Ankit Tiwari, Renu Choudhary, Kuldeep Mahiya

Straightforward Access to 3,4-Dihydro-2H-1,2,4-benzothiadiazine 1,1-dioxides and Quinazolines via Iron-Catalyzed Aerobic Oxidative Condensation of Amines

ChemistrySelect **2019**, *4*, 5200-5205.

26) Kundu Suman, Thelma Bittianda Kuttapa, Kovuru Gopalaiah, Prabhakar Pankaj, Dey Sanjay Kumar, Maulik Subir Kumar, Saini Manisha

An Anti-Hypertensive Cardio-Protective Composition

Indian Patent, Application No. IN201811005899, Date of Award: 30.08.2019

25) Kovuru Gopalaiah, D. C. Rao, Kuldeep Mahiya, Ankit Tiwari

Iron-Catalyzed Aerobic Oxidative Cleavage and Construction of C-N Bonds: A Facile Method for Synthesis of 2,4,6-Trisubstituted Pyridines

Asian Journal of Organic Chemistry **2018**, *7*, 1872-1881.

- Selected as a Very Important Paper

24) S. Goel, H. Yadav, N. Sinha, B. Singh, I. Bdikin, D. C. Rao, K. Gopalaiah, B. Kumar

An Insight into the Synthesis, Crystal Structure, Geometrical Modelling of Crystal Morphology, Hirshfeld Surface Analysis and Characterization of *N*-(4-Methylbenzyl) benzamide Single Crystals

Journal of Applied Crystallography, **2017**, *50*, 1498–1511.

23) Kovuru Gopalaiah, Anupama Saini, Alka Devi

Iron-Catalyzed Cascade Reaction of 2-Aminobenzyl Alcohols with Benzylamines: Synthesis of Quinoxalines by Trapping of Ammonia

Organic and Biomolecular Chemistry **2017**, *15*, 5781–5789 (Impact factor: 3.412).

22) Kovuru Gopalaiah, A. Saini, S. N. Chandrudu, D. C. Rao, H. Yadav, B. Kumar

Copper-Catalyzed Aerobic Oxidative Coupling of *o*-Phenylenediamines with 2-Aryl/Heteroarylethylamines: Direct Access to Construct Quinoxalines

Organic and Biomolecular Chemistry **2017**, *15*, 2259–2268 (Impact factor: 3.412).

21) H. Yadav, N. Sinha, S. Goel, B. Singh, I. Bdikin, A. Saini, K. Gopalaiah, B. Kumar

Growth, Crystal Structure, Hirshfeld Surface, Optical, Piezoelectric, Dielectric and Mechanical Properties of Bis(L-Asparaginium Hydrogensquarate) Single Crystal

Acta Crystallographica, **2017**, *B73*, 347-359.

20) Kovuru Gopalaiah, Anupama Saini

A Solvent-Free Process for Synthesis of Imines by Iron-Catalyzed Oxidative Self- or Cross-Condensation of Primary Amines Using Molecular Oxygen as Sole Oxidant

Catalysis Letters **2016**, *146*, 1648–1654.

19) Kovuru Gopalaiah, S. N. Chandrudu, Alka Devi

Iron-Catalyzed Oxidative Coupling of Benzylamines and Indoles: Novel Approach for Synthesis of Bis(indolyl)methanes

Synthesis **2015**, *47*, 1766-1774.

- *This article has been selected for the themed collection: Iron in Organic Synthesis*

18) Kovuru Gopalaiah, S. N. Chandrudu

Iron(II) Bromide-Catalyzed Oxidative Coupling of Benzylamines with *ortho*-Substituted Anilines: Synthesis of 1,3-Benzazoles

RSC Advances **2015**, *5*, 5015-5023.

- 17) S. Ahmad, K. Gopalaiah, S. N. Chandrudu, R. Nagarajan
Anion (Fluoride)-Doped Ceria Nanocrystals: Synthesis, Characterization, and its Catalytic Application to Oxidative Coupling of Benzylamines
Inorganic Chemistry **2014**, *53*, 2030–2039 (Impact Factor: 4.825).
- 16) Kovuru Gopalaiah
Chiral Iron Catalysts for Asymmetric Synthesis
Chemical Reviews **2013**, *113*, 3248–3296 (Impact Factor: 52.758).
• *Most Read Article in 2013*
- 15) Kovuru Gopalaiah, Henri B. Kagan
Recent Developments in Samarium Diiodide Promoted Organic Reactions
The Chemical Record **2013**, *13*, 187–208 (Impact factor: 6.163).
- 14) Kovuru Gopalaiah, Henri B. Kagan
Use of Nonfunctionalized Enamides and Enecarbamates in Asymmetric Synthesis
Chemical Reviews **2011**, *111*, 4599–4657 (Impact Factor: 52.758).
- 13) Henri B. Kagan, Kovuru Gopalaiah
Early History of Asymmetric Synthesis: Who Are the Scientists Who Set Up the Basic Principles and the First Experiments ?
New Journal of Chemistry **2011**, *35*, 1933–1937.
• *Focus Article*
- 12) Masaki Tsukamoto, Kovuru Gopalaiah, Henri B. Kagan
Equilibrium of Homochiral Oligomerization of a Mixture of Enantiomers. Its Relevance to Nonlinear Effects in Asymmetric Catalysis
Journal of Physical Chemistry B **2008**, *112*, 15361–15368.
- 11) Kovuru Gopalaiah, Henri B. Kagan
Use of Samarium Diiodide in the Field of Asymmetric Synthesis
New Journal of Chemistry **2008**, *32*, 607–637.

- *Perspective*

10) Sosale Chandrasekhar, Deepak Chopra, Kovuru Gopalaiah, T. N. Guru Row

The Generalized Anomeric Effect in the 1,3-Thiazolidines: Evidence for Both Sulphur and Nitrogen as Electron Donors. Crystal Structures of Various *N*-Acylthi- azolidines Including Mercury(II) Complexes. Possible Relevance to Penicillin Action

Journal of Molecular Structure **2007**, *837*, 118–131.

9) M. Maheswara, V. Siddaiah, Kovuru Gopalaiah, V. Madhava Rao, C. Venkata Rao

A Simple and Effective Glycine-Catalysed Procedure for the Preparation of Oximes

Journal of Chemical Research **2006**, 362–363.

8) Kovuru Gopalaiah

Oxalic Acid: A Very Useful Brønsted Acid in Organic Synthesis

Synlett **2004**, 2838–2839.

7) Sosale Chandrasekhar, Kovuru Gopalaiah

Ketones to Amides via a Formal Beckmann Rearrangement in ‘One Pot’: A Solvent-Free Reaction Promoted by Anhydrous Oxalic Acid. Possible Analogy with the Schmidt Reaction

Tetrahedron Letters **2003**, *44*, 7437–7439.

6) Sosale Chandrasekhar, Kovuru Gopalaiah

Beckmann Reaction of Oximes Catalysed by Chloral: Mild and Neutral Procedures

Tetrahedron Letters **2003**, *44*, 755–756.

5) Jakka Kavitha, Kovuru Gopalaiah, Dodda Rajasekhar, Gottumukkala V. Subbaraju

Juspurpurin, an Unusual Secolignan Glycoside from *Justicia Purpurea*

Journal of Natural Products **2003**, *66*, 1113–1115.

4) Sosale Chandrasekhar, Kovuru Gopalaiah

Effective ‘Non-Aqueous Hydrolysis’ of Oximes with Iodic Acid in Dichloromethane under

Mild, Heterogeneous Conditions

Tetrahedron Letters **2002**, *43*, 4023–4024.

3) Sosale Chandrasekhar, Kovuru Gopalaiah

Beckmann Rearrangement of Ketoximes on Solid Metaboric Acid: A Simple and Effective Procedure

Tetrahedron Letters **2002**, *43*, 2455–2457.

2) Sosale Chandrasekhar, Kovuru Gopalaiah

Beckmann Rearrangement in the Solid State: Reaction of Oxime Hydrochlorides

Tetrahedron Letters **2001**, *42*, 8123–8125.

1) Kovuru Gopalaiah, Jakka Kavitha, Raju V Kanumuri, Dodda Rajasekhar, G. V. Subbaraju

Justicia lignans: Part 9[†] – Two new lignans from *Justicia neesii* Ramamoorthy (white flower variety)

Indian Journal of Chemistry **2001**, *40B*, 596–600.

- **Number of Citations: 1480, h-index: 18.**

Publications in the Last one year

1) Kovuru Gopalaiah, Renu Choudhary

Synthesis of Kröhnke Pyridines through Iron-Catalyzed Oxidative Condensation/Double Alkynylation/Amination Cascade Strategy

Tetrahedron, **2021**, *98*, 132429.

2) P. Yadav, K. Gopalaiah, V. Shrivastava, R. Nagarajan

Microspherical core-shell MoO₂-graphitic C₃N₄ heterojunction promoted integration leading to Kröhnke pyridines and degradation of xylenol orange

Materials Today Communications **2021**, *26*, 102117.

Conference Organization/ Presentations (in the last three years)

- 1) 11th National Conference on Solid State Chemistry and Allied Areas, organized by Seth Kesarimal Porwal College of Arts, Science & Commerce, Kamptee (20-21 December 2019); Title of the Talk: “Synthesis of Biologically Active N-Heterocycles via Iron-Catalyzed Cascade Oxidative Condensation and Annulation”.
- 2) *National Symposium on Discovery of Periodic Table and Scientific Developments: The Incredible Contribution of Dmitri Mendeleev*, organized by A.S.D. Govt. College for Women (A) Kakinada (2 March 2019); Title of the Talk: “Construction of Bioactive N-Heterocycles by Transition Metal-Catalyzed Oxidative Reactions”.
- 3) *National Conference on Recent Trends and Advancements in Chemical Sciences*, organized by University of Delhi (29-31 March 2019); Title of the Talk: “Construction of N-Heterocycles by Sustainable Metal-Catalyzed Oxidative Annulation Reactions”.
- 4) *Indian Council of Chemists 36th Annual National Conference*, organized by School of Chemistry, Andhra University, Visakhapatnam (26-28 December 2017); Title of the Talk: “Bond Formations between Two Nucleophiles: Sustainable Metal-Catalyzed Oxidative Reactions”.
- 5) *10th National Conference on Solid State Chemistry and Allied Areas*, organized by Delhi Technological University, Delhi (1-3 July 2017); Title of the Talk: “Sustainable Metal-Catalyzed Aerobic Oxidative Transformations for Synthesis of Nitrogen-Heterocycles”.

Awards and Distinctions

- **ISCAS Dr. Lakshmi Endowment Medal** received from *Indian Association of Solid State Chemists and Allied Scientists*, December 2019.

- **Prof. D. Bhaskar Reddy Excellence Award** received from *Sri Venkateswara University*, March 2016.
- **Prof. Sudheer K. Banerjee Memorial Award – 2014** received from *Indian Council of Chemists*, December 2014.

Association With Professional Bodies

- Life Member of **Chemical Research Society of India**.
- Life Member of **Indian Council of Chemists**.
- Life Member of **Indian Chemical Society**.
- Life Member of **Him Science Congress Association**.
- Life Member of **Indian Association of Solid State Chemists and Allied Scientists**.

Other Activities

Reviewer

Chemical Reviews, Accounts of Chemical Research, Organic Letters, Journal of Organic Chemistry, ACS Omega, RSC Advances, Organic & Biomolecular Chemistry, Synthesis, Tetrahedron.

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.