# Dr. Manoj Kumar Gupta

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## 1. Appointment

Assistant Professor Department of Chemistry, Central University of Haryana, Mahendergarh, Haryana, February 2016-Present

## 2. Education & Training

Fast Track Young Scientist (PI) of Science & Centre of Biomedical Research (CBMR), Lucknow, Uttar Engineering Research Board (SERB), New Delhi funded project

Pradesh, April 2014-February 2016

FP7 Marie Curie (International Incoming Fellowship) Postdoctoral Research Associate

University College Cork, Ireland, September 2011-September 2013

Postdoctoral Research Associate

University of Alabama, Tuscaloosa, AL, USA and University of Tennessee Medical Centre (UTMC), Knoxville, TN, USA,

November 2009-April 2011

Research Associate

Sai Advantium Pharma Ltd., Hyderabad, India, 2008-2009

Ph.D.\*

(Research Adviser - Dr. J. S. Yadav)

CSIR-Indian Institute of Chemical Technology (IICT),

Hyderabad, India, 2003-2008

(\*The conferred degree awarded from Vidyasagar University, Midnapore, W.B. in 2009)

#### 3. Professional Recognitions, Awards and Fellowships

| <u>Year</u> | Awards and Fellowships                           | Awarding agency                           |
|-------------|--|---|
| 2013        | Fast Track Young Scientist Start-up Research     | Science & Engineering Research Board, New |
|             | Grant in Chemical Sciences                       | Delhi, India                              |
| 2012        | Ireland's Champions of EU Research               | Seventh EU Framework Programme Ireland    |
| 2010        | EU Marie-Curie International Incoming Fellowship | Marie-Curie Actions (European Union)      |
| 2009        | Asia Outstanding Thesis Award (First Prize)      | Eli-Lilly & Company, USA                  |
| 2007        | Selected for Director's Special Appreciation     | CSIR-IICT Hyderabad, India                |
|             | Award for SRF                                    |   |
| 2005        | Selected for Best SRF Award                      | CSIR-IICT Hyderabad, India                |
| 2004        | Selected for Best JRF Award                      | CSIR-IICT Hyderabad, India                |
| 2005-2008   | CSIR- Senior Research Fellowship (SRF)           | CSIR New Delhi, India                     |
| 2003-2005   | CSIR-Junior Research Fellowship (JRF)            | CSIR New Delhi, India                     |
| 2002        | Uttar Pradesh State Level Eligibility Test       | UGC, India                                |
| 2002        | CSIR-JRF (June 2002) and CSIR-NET (Dec 2002)     | CSIR-UGC, New Delhi                       |

## 4. Teaching Interests

- SCS CH 1 1 02 C 4004 Organic Chemistry- I
- SCS CH 1 2 06 C 4004 Organic Chemistry II
- SCS CH 1 3 09 C 4004 Applications of Spectroscopy
- SCS CH 1 3 10B C 4004 Heterocyclic and Natural Products Chemistry
- SCS CH 1 1 06 DCEC 4004 Medicinal Chemistry
- SCS CH 1 2 08 C 0044 Chemistry Laboratory-II

## 5. Research Interests

- Technology Based Synthetic Organic Transformations.
- Development of New methods in Organic Syntheses and its Application towards the Total Synthesis of Bio-active Natural Products.
- Medicinal Chemistry and Chemical Biology.

Note: Suitable qualified candidates with organic chemistry background may contact via email at <a href="mkgupta@cuh.ac.in">mkgupta@cuh.ac.in</a> for the availability of Ph.D. and R.A. positions.

## 6. Funded Project (Ongoing)

1. Fast Track Young Scientist Startup Research Grant funded by Science & Engineering Research Board (SERB), New Delhi, Amount Rs. 29,87,333/- (For three years)

## 7. Research Group

#### (i) Current member (Ph.D.)

1. Mr. Anil Kumar, M.Sc. (CSIR-JRF AIR - 80)
Date of Joining - July 2016

#### (ii) Past member (M.Sc. Project)

- 1. Mr. Vikas Yadav (2016)
- 2. Mr. Anil Kumar (2016)
- 3. Mrs. Pooja Yadav (2016)
- 4. Mr. Vipin Arora (2016)

#### (iii) Students supervised during Postdoc

Supervised 2x final year undergraduate Pharmacy students in Department of Chemistry & School of Pharmacy, ABCRF Cavanagh Pharmacy Building, University College Cork, Ireland in 2012 & 2013

## 8. Teaching and Learning courses

Teaching and Learning for Researchers 2012-2013
 Facilitators: Dr Bettie Higgs and Dr Marian McCarthy, and invited contributors, Ionad Bairre, The Teaching and Learning Centre, University College Cork, Ireland

## 9. List of Published Papers & Reviews in Peer Reviewed Journals

Total number of publications : 37 h-index : 15

| Journal wise break up         |               |        |  |  |
|-------------------------------|---------------|--------|--|--|
| Journal                       | Impact Factor | Number |  |  |
| Organic Letters               | 6.732         | 1      |  |  |
| Chemical Communications       | 6.567         | 2      |  |  |
| J. Organic Chemistry          | 4.785         | 2      |  |  |
| J. Mol. Catalysis A: Chemical | 3.958         | 3      |  |  |
| Catalysis Communications      | 3.389         | 2      |  |  |
| RSC Adv.                      | 3.289         | 1      |  |  |
| Eur. J. Org. Chem.            | 3.068         | 1      |  |  |
| Synthesis                     | 2.652         | 7      |  |  |
| Synlett                       | 2.323         | 3      |  |  |
| Tetrahedron Letters           | 2.347         | 9      |  |  |
| Curr. Org. Chem               | 1.949         | 1      |  |  |
| Int. J. Phar. Sci. Res.       | 1.79          | 1      |  |  |
| Monatsh. Chem.                | 1.131         | 4      |  |  |

#### 2016

37. O`Reilly K, **Gupta MK**, Gandhi H, Kumar VP, Eccles KS, Lawrence SE, O`Sullivan TP, "Cinchonacatalysed, enantioselective synthesis of β-peroxycarboxylic acids, β-peroxyesters and β-peroxyalcohols" *Curr. Org. Chem.*, **2016** (ASAP). DOI: 10.2174/1385272820666160513164417 *Impact factor - 1.949* 

## 2015

36. Li Z, **Gupta MK**, Snowden TS, "One-carbon homologation of primary alcohols and the reductive homologation of aldehydes involving a Jocic-type reaction" *Eur. J. Org. Chem.* **2015**, 7009-7019. *Impact factor - 3.068* 

## 2014

- 35. **Gupta MK**, Li Z and Snowden TS, "Preparation of one-carbon homologated amides from aldehydes or primary alcohols" *Org. Lett.* **2014**, *16*, 1602-1605. *Impact factor 6.732*
- 34. Yadav JS, Yadav NN, **Gupta MK**, Srivastava N and Reddy BVS, "GaCl<sub>3</sub>-catalyzed activation of alkynyl glycosides for the synthesis of *O*-glycosides" *Monatsh Chem* **2014**, *145*, 517-520. *Impact factor 1.131*

## 2013

33. **Gupta MK** and O'Sullivan T.P., "Recent applications of gallium and gallium halides as reagents in organic synthesis" *RSC Adv.* **2013**, *3*, 25498-25522. *Impact factor -* 3.289

32. Yadav JS, Reddy PKM, **Gupta MK** and Reddy BVS, "A short and facile stereoselective total synthesis of cryptocarya diacetate" *Monatsh Chem.* **2013**, *144*, 1583-1587. *Impact factor - 1.131* 

#### 2012

- 31. **Gupta MK**, Li Z and Snowden TS, "One-pot synthesis of trichloromethyl carbinols from primary alcohols" *J. Org. Chem.* **2012**, *77*, 4854-4860. *Impact factor 4.785*
- 30. Yadav JS and **Gupta MK**, "Self-assembled lipid nanotubes, nanosheets and nanopipes" *Int. J. Phar. Sci Res.* **2012**, *3*, 4822-4826. *Impact factor 1.79*

#### 2010

29. Yadav JS, **Gupta MK**, Jain R, Yadav NN and Reddy BVS, "A practical synthesis of bis(indolyl)methanes employing boric acid" *Monatsh Chem* **2010**, *141*, 1001-1004. *Impact factor - 1.131* 

#### 2009

28. Yadav JS, Reddy, BVS, Yadav NN and **Gupta MK**, "Three-component coupling of isoquinoline, activated alkyne and nitromethane: a facile synthesis of nitromethyl derivatives of 1,2-dihydroisoquinolines" *Synthesis* **2009**, 1131-1136. *Impact factor -* 2.652

#### 2008

- 27. Yadav JS, Reddy BVS, Yadav NN, **Gupta MK** and Sridhar B, "Gold(III) chloride catalyzed three-component reaction: A facile synthesis of alkynyl derivatives of 1,2-dihydroquinolines and isoquinolines" *J. Org. Chem.* 2008, 73, 6857-6859.

  Impact factor 4.785
- 26. Yadav JS, Reddy BVS, Sengupta S, **Gupta MK**, Baishya G, Harshavardhana SJ and Dash U, "lodine as mild, efficient and cost-effective catalyst for the synthesis of thiiranes from oxiranes" *Monatsh Chem.* **2008**, 139, 1363-1367. *Impact factor 1.131*
- 25. Yadav JS, Reddy BVS, Yadav NN and **Gupta MK**, "Three-component coupling reactions of isoquinoline, dimethyl acetylenedicarboxylate and indoles: facile synthesis of 3-indolyl-1,2-dihydro-2-isoquinolinyl-2-butenedioate" *Tetrahedron Lett.* **2008**, *49*, 2815-2819. *Impact factor -* 2.347
- 24. Yadav JS, Reddy BVS, Pandurangam T, Reddy YJ and **Gupta MK**, "PMA/SiO<sub>2</sub> catalyzed amidation of alcohols with nitriles: A simple, cost-effective and recyclable catalytic system for Ritter reaction" *Cat. Commun.* 2008, 9, 1297-1301.

  Impact factor 3.389

#### 2007

23. Yadav JS, **Gupta MK**, Prathap I, Bhadra MP, Mohan K and Jagannadh B, "Synthesis and cellular uptake of cell delivering 2,6-pyridinediylbisalkanamide submicron-sheets in HeLa cells" *Chem. Commun.* **2007**, 3832-3834.

Impact factor - 6.567

- 22. Yadav JS, Reddy PMK, **Gupta MK** and Chary CJ, "Stereoselective total synthesis of tarchonanthuslactone & formal synthesis of (-)-colletol" *Synthesis* **2007**, 3639-3646. *Impact factor* 2.652
- 21. Yadav JS, **Gupta MK** and Prathap I, "Facile stereoselective synthesis of the C12-C24 fragment of macrolactin-A" *Synthesis* **2007**, 1343-1348. *Impact factor* 2.652
- 20. Yadav JS, Reddy BVS, **Gupta MK**, Dash U, Bhunia DC and Hossain SS, "Mild and efficient coupling of diazo compounds with aza-aromatic systems under solvent-free conditions" *Synlett* **2007**, 2801-2804 *Impact factor -* 2.323
- 19. Yadav JS, Reddy BVS, Rao TS, Narender R and **Gupta MK**, "PMA/SiO<sub>2</sub> as efficient, cost-effective and recyclable catalytic system for the synthesis of highly substituted pyrroles" *J. Mol. Catal. A: Chemical* **2007**, 278, 42-46. *Impact factor 3.958*
- 18. Yadav JS, Reddy BVS, **Gupta MK**, Prathap I and Pandey SK, "Amberlyst A-21<sup>®</sup>: an efficient, cost-effective and recyclable catalyst for the synthesis of substituted 4*H*-chromenes" *Cat. Commun.* **2007**, *8*, 2207-2210. *Impact factor 3.389*
- 17. Yadav JS, Reddy BVS, **Gupta MK**, Prathap I and Dash U, "Facile addition of ketones to activated isoquinolines using *N*-methyl-2-pyrrolidinone" *Synthesis* **2007**, 1077-1081. *Impact factor* 2.652
- 16. Yadav, JS, Reddy BVS, **Gupta MK**, Dash U and Pandey SK, "Gallium(III) chloride catalyzed stereoselective synthesis of *E*-configured  $\alpha,\beta$ -unsaturated ketones" *Synlett* **2007**, 809-811. *Impact factor* 2.323
- 15. Yadav JS, Reddy BVS, **Gupta MK** and Pandey SK, "Gallium(III) iodide-promoted stereoselective aldol coupling of  $\alpha,\beta$ -acetylenic ketones" *J. Mol. Catal. A: Chemical* **2007**, 264, 309-312. *Impact factor -* 3.958
- 14. Yadav JS, Reddy BVS, Reddy PMK, Dash U and Gupta MK, "Indium(III) bromide catalyzed cleavage of cyclic and acyclic ethers: an efficient and practical ring opening reaction" J. Mol. Catal. A: Chemical 2007, 271, 266-269
  Impact factor 3.958

## 2005

- 13. Yadav JS, Reddy BVS, Reddy PMK and **Gupta MK**, "Zn/[bmim]PF<sub>6</sub>-mediated Markovnikov allylation of unactivated terminal alkynes" *Tetrahedron Lett.* **2005**, *46*, 8411-8413. *Impact factor 2.347*
- 12. Yadav JS, Reddy BVS, Reddy PMK and **Gupta MK**, "Mild and efficient method for the cleavage of cyclic and acyclic ethers by iodine under solvent-free conditions" *Tetrahedron Lett.* **2005**, *46*, 8493-8495. *Impact factor 2.347*
- 11. Yadav JS, Reddy BVS, **Gupta MK** and Eeshwaraiah B, "CeCl<sub>3</sub>·7H<sub>2</sub>O/Nal-promoted stereoselective Aldol coupling of  $\alpha,\beta$ -acetylenic ketones" *Synthesis* **2005**, 57-60. *Impact factor* 2.652
- 10. Yadav JS, Reddy BVS, Baishya G, Harshavardhan SJ, Chary CJ and **Gupta MK**, "Green approach for the conversion of olefins into *vic*-halohydrins using *N*-halosuccinimides in ionic liquids" *Tetrahedron Lett*. **2005**, *46*, 3569-3572. *Impact factor -* 2.347

- 9. Yadav JS, Reddy BVS, Eeshwaraiah B, **Gupta MK** and Biswas SK, "Gallium(III) halide promoted synthesis of 1,3,5-triaryl-1,5-dihalo-1,4-pentadienes" *Tetrahedron Lett.* **2005**, *46*, 1161-1163. *Impact factor 2.347*
- 8. Yadav JS, **Gupta MK**, Pandey SK, Reddy BVS and Sarma AVS, "Nucleophilic displacement by azide and cyanide on Baylis-Hillman acetates in water" *Tetrahedron Lett.* **2005**, *46*, 2761-2763. *Impact factor 2.379*
- 7. **Gupta MK**, "Copper(II) trifluoromethanesulfonate" *Synlett*, **2005**, 1044-1045 *Impact factor* 2.323
- 6. Ansari IA, Joyasawal S, **Gupta MK**, Yadav JS and Gree R, "Wacker oxidation of terminal olefins in a mixture of [bmim][BF<sub>4</sub>] and water" *Tetrahedron Lett.* **2005**, *46*, 7507-7510. *Impact factor 2.347*

#### 2004

- 5. Yadav JS, Reddy BVS, **Gupta MK** and Biswas SK, "Rapid and efficient protocol for the synthesis of 4-halotetrahydropyrans using Niobium(V) chloride and gallium(III) halides" *Synthesis* **2004**, 2711-2715. *Impact factor -* 2.652
- 4. Yadav JS, Reddy BVS, Eeshwaraiah B and **Gupta MK**, "Bi(OTf)<sub>3</sub>/[bmim]BF<sub>4</sub> as novel and reusable catalytic system for the synthesis of furan, pyrrole and thiophene derivatives" *Tetrahedron Lett.* **2004**, *45*, 5873-5876.

Impact factor - 2.347

- 3. Yadav JS, Reddy BVS and **Gupta MK**, "Ferric(III) chloride promoted efficient thiocyanation of arylalkenes: a facile synthesis of dithiocyanates" *Synthesis* **2004**, 1983-1986. *Impact factor -* 2.652
- 2. Yadav JS, Reddy BVS, Padmavani B and **Gupta MK**, "Gallium(III) halide catalyzed coupling of indoles with phenylacetylene: synthesis of bis(indolyl)phenylethanes" *Tetrahedron Lett.* **2004**, *45*, 7577-7579. *Impact factor 2.347*
- 1. Yadav JS, Reddy BVS, **Gupta MK**, Prabhakar A and Jagadeesh B, "First example of ring expansion of activated quinolines and isoquinolines: novel benzoazepines" *Chem. Commun.* **2004**, 2124-2125. *Impact factor 6.567*

#### **Conference Publications**

- 2. O'Reilly K, **Gupta MK**, O'Sullivan TP, "Enantioselective Peroxidaton of Unsaturated Aldehydes A New Route to Plakortide P" "65<sup>th</sup> Irish Universities Chemistry Research Colloquium Dublin, Ireland" in 2013.
- 1. O'Reilly K, **Gupta MK**, O'Sullivan TP, "Organocatalytic enantioselective peroxidation of unsaturated aldehydes a new route to bioactive cycloperoxides" *North West Organic Chemistry Symposium* Liverpool, U.K in 2012.

#### 10. Invited Talks

• Centre of Biomedical Research, SGPGI MS Campus, Lucknow, Uttar Pradesh, July 5, 2016 Title - New Strategy for One-Carbon Homologation Functionalization Reactions

## Delivered lectures in symposia

- Dr. K.V. Rao Scientific Society at B. M. Birla Science Centre, Hyderabad, 2008. Title - Synthesis, self-assembly and cellular uptake studies of bioactive molecules.
- Second Junior National Organic Symposium Trust (*J-NOST*) at International College for Girls, Jaipur, India, 2006.
  - Title Towards the total synthesis of macrolactin-A and development of one pot syntheses.

## Poster presented in symposia

- Joint International Conference on Advances in Organic Synthesis and Chemical Biology, IICT Hyderabad, 2006.
  - Title: Exploring the application of activated quinolines and isoquinolines: L-proline catalyzed asymmetric addition reaction of activated isoquinolines with ketones.
- 2<sup>nd</sup> International Conference on Organic Synthesis and Process Chemistry, IICT Hyderabad, 2005. Title- First Example of ring expansion of activated quinolines and isoquinoloines: novel benzoazepines.