

CURRICULUM-VITAE

Name: Y. D. VANKAR
Date of Birth: December 5, 1950
Place of Birth: Varanasi, India

Academic and Professional Career:

| Degree/position held | Year | University/Institution |
|---|---------------------------------------|--|
| M.Sc. | 1971 | Banaras Hindu University, Varanasi |
| Ph.D. | 1976 | National Chemical Laboratory, Pune |
| Research Scientist | 1975-76 | Hindustan Lever Research Centre, Bombay |
| Post-doctoral Research Associate | 1976-77 | King's College, London, U.K. (With Prof. D. I. Davies) |
| -do- | 1977-79 | University of Southern California, Los, Angeles, U.S.A. (With Prof. G. A. Olah, Nobel Laureate) |
| -do- | 1979-80 | Rice University, Houston, Texas, U.S.A. (With Prof. E. Wenkert) |
| Lecturer | 1981-82 | Indian Institute of Technology, Kanpur |
| Assistant Professor | 1982-91 | Indian Institute of Technology, Kanpur |
| Professor | 1991-present | Indian Institute of Technology, Kanpur |
| Head of the Department | January 2005- January 2008 | Indian Institute of Technology, Kanpur |
| S.K. Roy Memorial Chair Professor | October 2008- October 2011 | Indian Institute of Technology, Kanpur |
| Mr. and Mrs. Giyan Singh Bindra Chair Professor | (July 01, 2013- December 31, 2015) | Indian Institute of Technology, Kanpur |

Research Interests:

1. Synthetic Carbohydrate Chemistry of Biological Relevance (Glycosidase Inhibitors)
2. Functionalisation of carbohydrates leading to Glycosyl and Sugar Amino Acids, Amino Sugars and O- and C-Glycosides
3. Development of Newer Synthetic Methods

Visiting Appointments:

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| Visiting Scientist | Aug. 1985- Dec. 1985 | University of California, San Diego, La Jolla, U.S.A. (With Prof. E. Wenkert) |
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| Alexander von Humboldt Fellow | 1990-91 | Universität Konstanz, Konstanz, Germany (With Prof. Dr. R. R. Schmidt) |
| do- | May 1995- July 1995 | -do- |
| Visiting Scientist | Dec. 1996- May 1997 | University of Southern California, Los Angeles, U.S.A. (With Prof. G. A. Olah, Nobel Laureate) |
| Alexander von Humboldt Fellow | May'-July 1999 | Universität Konstanz, Konstanz, Germany (With Prof. Dr. R. R. Schmidt) |
| Alexander von Humboldt Fellow | Aug-Sept. 2004 | Universität Konstanz, Konstanz, Germany (With Prof. Dr. R. R. Schmidt) |

Awards and Honours:

1. **FNA:** Fellow of the "Indian National Science Academy, New Delhi (2010)
2. **FASc:** Fellow of the "Indian Academy of Sciences, Bangalore" (2002)
3. **FRSC:** Fellow of the "Royal Society of Chemistry, London" (2007)
4. J.C. Bose National Fellowship of DST (2010-2015)
5. Ramanna Fellowship of DST (2006-2009)
6. Bronze Medal of the "Chemical Research Society of India" (2000)
7. Dr. Basudev Banerjee Memorial Medal of the "Indian Chemical Society" (1989)
8. Professor T. R. Seshadri Memorial Lecture of Delhi University (2005)
9. S.K. Roy Memorial Chair Professor (October 2008-October 2011) at the Indian Institute of Technology, Kanpur
10. Mr. and Mrs. Giyan Singh Bindra Chair Professor (July 01, 2013-June 30, 2016)
11. Distinguished Teacher's Award 2015 of Indian Institute of Technology, Kanpur (Conferred on September 05, 2015)

Membership of Societies:

1. Member, American Chemical Society
2. Life Member, Chemical Research Society of India
3. Member, Royal Society of Chemistry, London

Teaching Experience: More than 33 years (Since July 1981). This includes teaching various courses for Ph.D. students (our department requires PhD students to take 6 courses before starting PhD work); for MSc students of both MSc II year programme and Integrated programme, and also chemistry courses for BTech students. Various courses that I have taught include Basic Organic Chemistry, Physical Organic Chemistry, Organometallic Chemistry, Synthetic Organic Chemistry, Principles of Organic Chemistry, Chemistry of Natural products, Industrial organic Chemistry, Tutorials at B.Tech. and MSc level students, various laboratory courses for B.Tech. and MSc students.

(a) Taught the following courses:

Chm 101 lab course; Chm 102 (BTech); Chm 201 (BTech level); Chm 205 (Industrial organic chemistry); Chm 301; Chm 302; Chm 401; Chm 402; Chm 404 (Lab course) ; Chm 501; Chm 503 (Lab course); Chm 602; Chm 609; Chm 611; Chm 612; Chm 616; Chm 631; Chm 662.

(b) Tutorials: I have been involved in tutorials for BTech level courses and also Industrial organic chemistry right from the beginning.

(c) On numerous occasions I have received commendation letters from the Director for being an extraordinary teacher in various courses that I have taught over the years.

Administrative and other Experiences:

- (1) Chairman, Senate Undergraduate Committee (SUGC), IIT Kanpur (**1988-1989**)
- (2) Acting Head, Counselling Service (July-December **1989**)
- (3) Member, Examination Panel of the International Chemistry Olympiad, Mumbai (**2001**)
- (4) Chief Mentor of the Indian Team at the International Chemistry Olympiad, Groningen, The Netherlands (**2002**)
- (5) Member, Programme Advisory Committee, Women's Scientist's Scheme, Department of Science and Technology, New Delhi (**2005-2012**)
- (6) Member, Board of Studies, University of Hyderabad, Hyderabad (**2006-2008**)
- (7) Head, Chemistry Department, IIT Kanpur (January **2005**-January **2008**)
- (8) Member, Sectional Committee, Indian Academy of Sciences (**2007-2009 and 2013**)
- (9) Member of the Editorial Board of J. Chem. Sciences (**2007-2011**)
- (10) Regular referee for the Journal of Organic Chemistry, Organic Letters, Synlett, Tetrahedron Letters, Tetrahedron, Carbohydrate Research, Bio-Organic Medicinal Chemistry Lett., Tetrahedron:Asymm,

Invited Lectures in India and Abroad:

(Conferences and Symposium)

1. Delivered a lecture at National Symposium on “*Reagents, Reactions and Rearrangements*” held at University of Madras, Madras (Jan. 24-26, **1984**)
2. Paper presented at “*VII IUPAC conference on Organic Synthesis*” held at Nancy, France (July 4-7, **1988**)
3. “Dr. Basudev Banerjee Memorial Lecture” delivered at “*Annual Convention of Chemists*” held at Jadavpur University (Dec. 17-21, **1991**)
4. Delivered two lectures in the “*Training Course in Frontiers in Organic Synthesis*” held at IISc, Bangalore (Dec. 8-10), **1993**
5. Delivered a talk at a Symposium on “*Recent Trends in Chemistry*” at Department of Chemistry, Panjab University, Chandigarh (Feb. 21-22, **1994**)
6. Delivered a lecture at a symposium held at ICT, Hyderabad organised by the “*Chemical Research Society of India*” (January, **2000**)

7. Delivered a lecture at a symposium held at IACS, Calcutta organised by the "*Royal Society of Chemistry, Eastern Section.*" (February, **2000**)
8. Delivered a lecture in a symposium at Jaipur organised by '*NOST*' (March **2000**)
9. Delivered a lecture at "*National Symposium in Organic Synthesis: Prospects and Retrospects*", Banaras Hindu University, January 19-21, **2001**
10. Delivered a lecture at a symposium held at Panjab University, Chandigarh organised by the "*Chemical Research Society of India*" (February **2001**)
11. "Delivered two lectures at Guru Nanak Dev University: Amritsar on 29 and 30th October, 2001. "*Carbohydrates: Much more than mere source of energy*" sponsored by the Indian Academy of Sciences
12. Delivered a seminar at a symposium (*Pharmacophore 2001*) held at *Dr. Reddy's Research Foundation* at Hyderabad on December 7, **2001**
13. Delivered a lecture at Panjab University, Chandigarh as part of the 68th annual meeting of the Indian Academy of Sciences, Bangalore on "Carbohydrates: Much more than mere source of energy. Synthesis of Biologically important carbohydrate molecules" on November 10, **2002**
14. "Delivered two lectures at Gorakhpur Univeristy, Gorakhpur on November 24, 25, **2002** "Carbohydrates: Much more than mere source of energy" sponsored by the Indian Academy of Sciences.
15. Delivered a lecture at a "National Organic Symposium Trust" symposium at Goa, India (25-29 October **2005**)"
16. Delivered a plenary lecture at "XX Carbohydrate Conference", Lucknow University (24-26th November **2005**)
17. Delivered a lecture at the "Indo-Singapore Symposium" held at Singapore (February 20-21, **2006**)
18. Delivered a lecture at the "International Carbohydrate Symposium" at Whistler, BC, Canada (July 22-28, **2006**) on July 25, **2006**
19. "Delivered two lectures at Government Model College, Jabalpur on September 16, **2006** 1. Modern reagents in organic synthesis 2. Carbohydrates: Much more than mere source of energy, sponsored by the Indian Academy of Sciences
20. Delivered a lecture at MS University Baroda, in a National Seminar on Chemistry Research on October 16, 17 **2006**.
21. Delivered a lecture at "Syngenta Research & Technology Centre" inauguration meeting on December 1, **2006** at Santa Monica Site, Goa
22. Delivered a talk on "Frontier Areas of Research in Organic Chemistry" in a workshop held by DST for "Sensitisation of Women Scientists Scheme" at Gorakhpur on 21st June, **2007**.
23. A lecture entitled "Synthesis of some useful glycosidase inhibitors and related bioactive molecules" was delivered in a National Symposium on "Organic Chemistry and Drug Research" held at Central Drugs Research Institute, Lucknow on June 28, **2007**.
24. A lecture entitled "Fused and bicyclic heterocycles as glycosidase inhibitors" delivered in Indo-French symposium on Organic Synthesis held at Manoir de la Vicomté, Dinard, France (September 12, **2007**).
25. A lecture entitled "Synthetic Approaches towards Glycosidase Inhibitors" delivered in Indo-Russian symposium as part of Mendeleev Conference in Moscow on September 24, **2007**.
26. A lecture entitled "Synthesis of Glycosidase Inhibitors: Molecules of Potential Therapeutic Importance" was delivered in an "Indo-German" conference held at IIT Kanpur on October 28, **2007**.
27. A lecture entitled "Carbohydrates: From Energy Source to Modern Medicines: Emphasis on the Role of Organic Synthesis" was delivered in a one-day symposium "New Dimensions in Chemical Sciences" held at P.G. College, Osmania University on January 30, **2010**

28. A lecture entitled "Chemistry of Glycols and 2-Substituted Glycols *en route* to the Synthesis of Some Biologically Important Molecules" was delivered in a one day symposium held at IIT Kanpur on April 15, **2011**
29. A lecture entitled "Contemporary Carbohydrate Chemistry and Emphasis on the Role of Organic Synthesis" was delivered at "A One-day UGC-Sponsored National Symposium: Current Trends in Chemical Research" at R. K. Mission Residential College, Narendrapur, Kolkata on June 24, **2011**.
30. A lecture entitled "Organic Synthesis: A Discipline of Everlasting Importance" was delivered in a symposium "Celebration of Chemistry @IITK" Dec 3, **2011**.
31. A lecture entitled "Chemistry of C-2 Substituted Glycols *en route* to Some Glycosidase Inhibitors" was delivered in "*CRSI Mid year meeting Symposium*" at CDRI, Lucknow on July 21, **2012**.
32. Delivered two lectures at "Sikkim Government College, Tedong, Gangtok," on April 12, and April 13, **2013** (i) Selected reagents for transformations addressing selectivity in organic synthesis and (ii) "Carbohydrates: Much more than mere source of energy" in Science Academies' workshop titled "Modern Trends in Chemistry" sponsored by the Academies of Sciences, India".
33. Delivered a lecture entitled "*Chemistry of Nitrosugars: Development of Some Synthetic Methods and Application in Synthetic Carbohydrate Chemistry*" at a "*National symposium on Organic Synthesis and Advanced Materials*" during March 01-02, **2014**. At Chemistry Department, BHU, Varanasi.
34. Delivered a talk on "*Carbohydrates: Much more than mere source of energy*" in a one day Symposium on "*Emerging Trends in Translational Research in India*" organized by the School of Natural Science, at Shiv Nadar University on, April 12, **2014**.
35. Delivered a talk on "From glycosidase inhibitors to glycosylation: utilization of the chemistry of glycols" in a "*RSC-IIT Kanpur symposium in Chemical Science*" at IIT Kanpur on November 23, **2015**.
36. Delivered a lecture on "*Synthesis of Biologically Important Molecules using the Chemistry of Glycols and C-2 Substituted Glycols*" in a "*RSC workshop on Chemistry of Tomorrow's world*" at University of Delhi (December 02-03, **2015**).

(Seminars)

1. Hindustan CIBA-Geigy Research Centre, Goregaon, Bombay (July, **1982**)
2. Department of Chemistry, Univ. of Calif., San Diego, U.S.A. (Oct. **1985**)
3. Hydrocarbon Research Institute, Los Angeles, U.S.A. (Dec. **1985**)
4. National Chemical Laboratory, Pune (Feb. **1987**)
5. School of Chemistry, University of Hyderabad (April **1987**)
6. Fakultät für Chemie, Universität Konstanz, Konstanz, Germany (July, **1988**)
7. Faculte des Sciences St. Jerome-UA-19-AV Normandie-Nieman-133397, Marseille, France (July, **1988**)
8. Department of Chemistry, King's College, London, U.K. (March, **1991**)
9. Department of Bioorganic Chemistry, Biomedical centre, Univ. of Uppsala, Sweden (April, **1991**)
10. School of Chemistry, University of Hyderabad, Hyderabad (Feb. **1994**)
11. Fakultät für Chemie, Universität Konstanz, Konstanz, Germany (**1995**)

12. Department of Chemistry, Banaras Hindu University, Varanasi (Aug. **1995**)
13. Department of Chemistry, IIT Delhi (Feb. **1996**)
14. Department of Chemistry, IIT Madras, (Dec. **1995**)
15. Delivered two lectures at Defence Research Laboratory, Gwalior (Nov. **1996**)
16. Hydrocarbon Research Institute, Los Angeles, U.S.A. (April 9, **1997**)
17. Stanford Research Institute, International, Menlo Park, California, U.S.A. (April 24, **1997**)
18. Department of Chemistry, University of California, Santa Cruz, U.S.A. (April 25, **1997**)
19. ISIS Pharmaceuticals, Carlsbad, San Diego, California, U.S.A. (May, **1997**)
20. University Department of Chemical Technology, Matunga, Mumbai, (November **1997**)
21. Department of Chemistry, Indian Institute of Technology Bombay, Mumbai (June, **1998**)
22. Institut für Organische Chemie, Technische Universität Dresden, Dresden, Germany (June **1999**)
23. Institut für Organische Chemie, Universität Tuebingen, Tuebingen, Germany (July **1999**)
24. Fakultät für Chemie, Universität Konstanz, Konstanz, Germany (July **1999**)
25. National Chemical Laboratory, Pune (February **2002**)
26. Department of Organic Chemistry, Indian Institute of Science, Bangalore (**2002**)
27. Department of Chemistry, IIT Madras, Chennai (**2003**)
28. Zydus-Cadilla, Ahmedabad (April 19, **2003**)
29. Sun-Pharma Research Centre, (Baroda April 21, **2003**)
30. Banaras Hindu University (September 19, **2003**)
31. University of Hyderabad (September 26, **2003**)
32. Fakultät für Chemie, Universität Konstanz, Konstanz, Germany (Sept. **2004**)
33. ETH, Zurich, Switzerland (September **2004**)
34. Department of Organic Chemistry, IISc Bangalore, 24th January **2005**
35. Department of Chemistry, University of Delhi, 3rd February, **2005**: Prof. T.R. Seshadri Memorial Lecture.
36. Department of Chemistry, IIT Delhi, 5th April, **2006**
37. Department of Chemistry, Universität Konstanz, Konstanz, Germany, May 8, **2006** under INSA-DFG exchange programme. Delivered a lecture titled "Synthetic endeavors towards glycosidase inhibitors and glycosamino acids"
38. Department of Organic Chemistry, Universität Tuebingen, Germany, May 10, **2006**
39. Department of Organic Chemistry, Universität Mainz, Germany, May 12, **2006**
40. Department of Organic Chemistry, Universität Stuttgart, May 15, **2006**
41. Department of Organic Chemistry, Universität Potsdam, May 17, **2006**
42. Department of Organic Chemistry, Freie Universität, Berlin, May 19, **2006**
43. Department of Chemistry, Technische Universität Dresden, May 22, **2006**
45. Indian Institute of Chemical Biology, Kolkata, June 14, **2006**
46. Apotex Pharma Chem Inc., Brantford, Ontario, Canada, July 31, **2006**
47. School of Chemistry, University of Hyderabad, Hyderabad (October **2006**)
48. Department of Chemistry, IIT Guwahati, Guwahati (January 17, **2007**)
49. Department of Chemistry, D.D.U. Gorakhpur University, Gorakhpur on June 21st, **2007**
50. Department of Chemistry, IIT Madras, Chennai, November 30, **2007**
51. Delivered two lectures entitled at the Department of Chemistry, NIT Jalandhar on February 15, **2008**

52. Delivered a lecture at the R & D Centre of Nagarjuna Fertilizers, Hyderabad on February 18, **2008**
53. Chemistry Department IIT Bombay on April 21, **2008**
54. Jubilant-Biosys, Bangalore on June 4, **2009**
55. Department of Organic Chemistry, IISc Bangalore, June 5, **2009**
56. Department of Chemistry, IIT Delhi, February 1, **2010**
57. Department of Chemistry, IIT Guwahati, Guwahati (January 03, **2011**)
58. Department of Chemistry, Gujarat University Ahmedabad (September 17, **2011**)
59. Department of Chemistry, Bangalore University, Bangalore, Dec 26, **2011**
60. Institute of Life Sciences, University of Hyderabad, January 05, **2012**
61. Department of Organic Chemistry, IISc Bangalore, April 26, **2012**
62. School of Chemistry, University of Hyderabad, Hyderabad (July 31, **2012**)
63. Department of Chemistry, IIT Kharagpur, Kharagpur (December 21, **2012**)
64. National Institute for Interdisciplinary Science and Technology, Trivandrum (September 24, **2013**).
65. R&D Section, P.I. Industries, Udaipur (January 27, **2014**).
66. Department of Chemistry, IIT Madras (February 21, **2014**).
67. School of Chemistry, University of Hyderabad, Hyderabad (July 21, **2014**)
68. Department of Chemistry, IIT Kharagpur, Kharagpur (March, 13 **2015**)
69. Department of Bio-Organic Chemistry, University of Uppsala, Uppsala, Sweden (May 12, **2015**)
70. Department of Organic Chemistry, Universität Potsdam, Germany (June 15, **2015**)
71. Department of Chemistry, Technische Universität Dresden, Germany (June 16, **2015**)
72. Fakultät für Chemie, Universität Konstanz, Konstanz, Germany (June 24, **2015**)
73. Department of Chemistry, Freie Universität, Berlin, Germany (July 01, **2015**)
74. Helmholtz-Zentrum Geesthacht Institute of Biomaterial Science, Teltow, Berlin, Germany (July 08, **2015**)
75. Department of Chemistry, Indian Institute of Science and Education Research (IISER), Trivandrum (October 24, **2015**).
76. Department of Chemistry, IIT Bombay (December 21, 2015).

List of Publications: (in reverse chronological order)

157. Au(III) Halides/Phenylacetylene Catalyzed Glycosylations using 1-*O*-Acetyl Furanoses and Pyranose 1,2-Orthoesters as Glycosyl Donors
Asadulla Mallick, Yakkala Mallikharjunarao, Parasuraman Rajasekaran, Rashmi Roy, Y. D. Vankar
Eur. J. Org. Chem. **2016**, doi.org/10.1002/ejoc.201501245
156. Recent Developments in the Synthesis of 2-*C*-Branched and 1,2-Annulated Carbohydrates
Yashwant D. Vankar, Torsten Linker
Eur. J. Org. Chem. **2015**, 7633-7642.
155. AuCl₃ and AuCl₃-Phenylacetylene catalyzed glycosylations using glycosyl trichloroacetimidates
Rashmi Roy, A. K. Palanivel, A. Mallick, and Yashwant D. Vankar
Eur. J. Org. Chem. **2015**, 4000-4005.

154. Diastereoselective Overman rearrangement using L-ascorbic acid based allylic alcohol. Application in the Synthesis of (+)-1,2-di-*epi*-swainsonine and tetrahydroxypyrrolizidine
Parasuraman Rajasekaran, Alafia A. Ansari and Yashwant D. Vankar
Eur. J. Org. Chem. **2015**, 2902-2913.
153. Synthesis of Isofagomine–Pyrrolidine Hybrid Sugars and Analogues of (–)-Steviamine and (+)-Hyacinthacine C5 Using 1,3-Dipolar Cycloaddition Reactions
Rima Lahiri, Ashokkumar Palanivel, Sudhir A. Kulkarni, and Yashwant D. Vankar
J. Org. Chem. **2014**, 79, 10786-10800.
152. Gold(III)chloride-phenyl acetylene: A new catalyst-system for the Ferrier Rearrangement, and O-glycosylation of 1-O-acetyl sugars as glycosyl donors
Rashmi Roy, Parasuraman Rajasekaran, Asadulla Mallick and Yashwant D. Vankar
Eur. J. Org. Chem. **2014**, 5564-5573.
151. A Concise Synthesis of (2R,3R)-, (2R,3S)-3-Hydroxypipicolinic Acids and Total Synthesis of (–)-Deoxoprosopinine and (+)-2-*epi*-Deoxoprosopinine from D-Glycals
Asadulla Mallick, Nitee Kumari, Rashmi Roy, Ashokkumar Palanivel and Yashwant D. Vankar
Eur. J. Org. Chem. **2014**, 5557-5563.
150. n-Tetrabutylammonium nitrate Suresh Dharuman and Yashwant D. Vankar
eEORS **2014** (In Press) (A book chapter in “**Encyclopedia in Organic Synthesis**”)
149. An easy route to synthetic Analogues of Radicamine B, Codonopsine and Codonopsinine from D-Mannitol
Suresh Dharuman, Ashok Kumar Palanivel and Yashwant D. Vankar
Org. Biomol. Chem. **2014**, 12, 4983-4998.
148. Synthesis and glycosidase inhibition study of 2-*C*-hydroxymethyl and 6-*C*-hydroxymethyl branched piperidines from D-glucose using ene-yne metathesis as a Key Step
Asadulla Mallick, and Yashwant D. Vankar
Eur. J. Org. Chem. **2014**, 4155-4161.
147. N-Halosuccinimide/AgNO₃:Efficient reagent systems for one step synthesis of 2-halo glycals from glycals: Application in the synthesis of 2C-branched sugars via Heck coupling reactions
Suresh Dharuman and Yashwant D. Vankar
Organic Letters **2014**, 16, 1172-1175.
146. Bicyclic hybrid sugars as glycosidase inhibitors: Synthesis and comparative study of inhibitory activities of fused oxa-oxa, oxa-aza and oxa-carbasugar hybrid molecules
Alafia A. Ansari, Parasuraman Rajasekaran, M. Musawwer Khan, and Yashwant D. Vankar
J. Org. Chem. **2014**, 79, 1690-1699.
145. Synthesis of pyrrolidine iminosugars, (–)-lentiginosine, (–)-swainsonine and their 8 α -epimers from D-Glycals
Alafia A. Ansaria and Yashwant D. Vankar
RSC Advances **2014**, 4, 12555 – 12567.
144. Ceric ammonium nitrate mediated efficient carbon-Ferrier rearrangement on glycals: Application in the synthesis of 2-deoxy-2-amino-C-glycoside.
Alafia A. Ansari, Y. Suman Reddy and Yashwant D. Vankar
Beilstein J. Org. Chem. **2014**, 10, 300-306.
143. Synthesis and Comparative Study of Homoisofagomines and Analogues as Glycosidase Inhibitors
R. K. Basak and Yashwant D. Vankar
Eur. J. Org. Chem. **2014**, 844–859.
142. Synthesis of Unnatural Indolizidines, Pyrrolizidine and C-alkyl Iminosugars from Sugar Derived Hemiaminals
Rima Lahiri, Y. Suman Reddy, Sudhir A. Kulkarni and Yashwant D. Vankar
RSC Advances **2013**, 3, 23242 – 23254.
141. Synthesis of isofagomine and a few new azasugars as glycosidase inhibitors from D-

- mannitol derived nitroolefins
Rashmi Roy, Pavan K. Kancharla, Y. Suman Reddy, Anita Brar, Y. D. Vankar
Tetrahedron:Asymm **2013**, *24*, 1502-1513.
140. Synthesis of Dihydroxymethyl Dihydroxypyrrolidines and Steviamine Analogues from C-2 Formyl Glycals
Alafia A. Ansari and Yashwant D. Vankar
J. Org. Chem. **2013**, *78*, 9383-9395.
139. Synthesis of L-3-epi-isofagomine, its homo-, n-butyl and bicyclic analogues from D-glucose as glycosidase inhibitors
Asadulla Mallick, A. P. John Pal, Yashwant D. Vankar
Tetrahedron Letters **2013**, *54*, 6549-6552.
138. Synthesis of 2-Nitroglycals from Glycals using “Tetrabutylammonium Nitrate–Trifluoroacetic anhydride–Triethylamine” Reagent System, and Base-Catalyzed Ferrier Rearrangement of Acetylated 2-Nitroglycals
Suresh Dharuman, Preeti Gupta, Pavan K. Kancharla and Yashwant D. Vankar
J. Org. Chem. **2013**, *78*, 8442-8450.
137. Recent developments in design and synthesis of bicyclic azasugars, carbasugars and related molecules as glycosidase inhibitors
Rima Lahiri, Alafia A. Ansari and Yashwant D. Vankar
Chem. Soc. Revs. **2013**, *42*, 5102-5118.
136. The carbon-Ferrier rearrangement: an approach towards the synthesis of C-glycosides
Alafia Ali Ansari, Rima Lahiri and Yashwant D. Vankar
ARKIVOC **2013**, 316-362.
135. Functionalization of Glycals Leading to 2-Deoxy-O-glycosides, Aminosugars, Nitrosugars and Glycosidase Inhibitors: Our Experience
Rima Lahiri, Suresh Dharuman, Yashwant D. Vankar
Chimia **2012**, *66*, 905-912.
134. Palladium catalyzed improved regio and stereoselective O-glycosylation of D-glucal derived α - and β -vinyl oxiranes
Y. Suman Reddy, Rima Lahiri, Yashwant D. Vankar
Eur. J. Org. Chem. **2012**, 4751-4761.
133. Synthesis of furan derivatives of cyclic β -amino acid cispentacins via intramolecular nitrile oxide cycloaddition
Ranjan K. Basak, Suresh Dharuman, Yashwant D. Vankar
Tetrahedron Lett. **2012**, *41*, 4283-4287.
132. HClO₄·SiO₂ mediated improved isomerisation of glycidic esters to α -hydroxy- β,γ -unsaturated esters: Application in the formal synthesis of (R)-Baclofen and β -phenyl GABA analogues
Ranjan K. Basak, Suresh Dharuman, Y. Suman Reddy, Yashwant D. Vankar
Chemistry Lett. **2012**, *41*, 325-327.
131. Aza-Claisen rearrangement on 2-C-hydroxymethyl glycals as a versatile strategy towards synthesis of isofagomine and related biologically important iminosugars
Y. Suman Reddy, Pavan K Kancharla, Rashmi Roy and Yashwant D. Vankar
Org. Biomol. Chem. **2012**, *10*, 2760-2773.
130. Total synthesis of (+)-pericosine B and (+)-pericosine C and their enantiomers by using the Baylis–Hillman reaction and ring-closing metathesis as key steps.
Y. Suman Reddy, P. Kadigachalam, Ranjan K. Basak, A.P. John Pal, Yashwant D. Vankar
Tetrahedron Letters **2012**, *53*, 132-136.

129. Ceric Ammonium Nitrate-Catalyzed Azidation of 1,2-Anhydro Sugars: Application in the Synthesis of Structurally Diverse Sugar-Derived Morpholine 1,2,3-Triazoles and 1,4-Oxazin-2-ones. Y. Suman Reddy, A. P. John Pal, Preeti Gupta, Alafia A. Ansari, Yashwant D. Vankar
J. Org. Chem. **2011**, *76*, 5972-5984.
128. Acetyl Chloride-Silver Nitrate-Acetonitrile: A Reagent System for the Synthesis of 2-Nitroglycals and 2-Nitro-1-Acetamido Sugars from Glycals
Pavan K. Kancharla, Y. Suman Reddy, Suresh Dharuman, Yashwant D. Vankar
J. Org. Chem. **2011**, *76*, 5832-5837.
127. Synthesis of Aminocyclitols and Trihydroxylated Indolizidinone from a D-Mannitol-Derived Common Building Block
Preeti Gupta, A. P. John Pal, Y. Suman Reddy, Yashwant D. Vankar
Eur. J. Org. Chem. **2011**, 1166-1175.
126. An improved method of ring closing metathesis in the presence of basic amines: application to the formal synthesis of (+)-lentiginosine and other piperidines and carbamino sugar analogs
Rima Lahiri, Hari Prasad Kokatla, Yashwant D. Vankar #
Tetrahedron Lett. **2011**, *52*, 781-786.
125. Synthesis of sugar-derived spiroaminals via lactamization and metathesis reactions
A. P. John Pal, P. Kadigachalam, Asadulla Mallick, D. V. Ramana, and Yashwant D. Vankar
Org. Biomol. Chem. **2011**, *9*, 809-819.
124. (3*S*,4*R*,5*R*)-3-(2-Hydroxyethyl)piperidine-3,4,5-triol as an isofagomine analogue: synthesis and glycosidase inhibition study
Preeti Gupta, Suresh Dharuman, Yashwant D. Vankar *Tetrahedron: Asymm.* **2010**, *21*, 2966-2972.
123. Chemistry of 2-Nitroglycals: A One-Pot Three-Component Stereoselective Approach toward 2-*C*-Branched *O*-Galactosides
Pavan K. Kancharla and Yashwant D. Vankar
J. Org. Chem. **2010**, *75*, 8457-8464.
122. Synthesis of Fused Oxa-Aza Spiro Sugars from D-Glucose Derived δ -Lactone as Glycosidase Inhibitors
A. P. John Pal, Preeti Gupta, Y. Suman Reddy and Yashwant D. Vankar
Eur. J. Org. Chem. **2010**, 6957-6966.
121. Molecular iodine-promoted *N*- and *C*-glycosylation of 1-*C*-alkyl (or phenyl)-glycopyranoses
A. P. John Pal, Asadulla Mallick, Y. Suman Reddy and Yashwant D. Vankar
Tetrahedron Lett. **2010**, *51*, 6334-6337.
120. Synthesis of (-)-deoxoprosophylline, (+)-2-*epi*-deoxoprosopinine and synthesis of (2*R*, 3*R*), (2*R*, 3*S*)-3-hydroxypipelic acids from D-glycals
Hari Prasad Kokatla, Rima Lahiri, Pavan K. Kancharla, Venkata Ramana Doddi and Yashwant D. Vankar *J. Org. Chem.* **2010**, *75*, 4608-4611.
119. Synthesis of 1,4-dideoxy-1,4-imino-heptitol and 1,5-dideoxy-1,5-imino-octitols from D-xylose
Amit Kumar, Mohammed Abrar Alam, Shikha Rani and Yashwant D. Vankar
Carbohydrate Res. **2010**, *345*, 1142-1148.
118. Azidation of anomeric nitro sugars: Application in the synthesis of spiroaminals as glycosidase inhibitors
A. P. John Pal and Yashwant D. Vankar
Tetrahedron Lett. **2010**, *51*, 2519-2524.
117. A concise route to (-)-Shikimic Acid and (-)-5-*epi*-Shikimic Acid, and their Enantiomers via Barbier Reaction and Ring-Closing Metathesis

- Pavan K. Kancharla, Venkata Ramana Doddi, Hariprasad Kokatla and Yashwant D. Vankar *Tetrahedron Lett.* **2009**, *50*, 6951-6954.
116. Intramolecular ketonitrone-olefin cycloaddition reaction: Direct and stereocontrolled synthesis of nitrogenated quaternary centered aminocyclopentitols as galactosidase inhibitors Y. Suman Reddy, P. Kadigachalam, Venkata Ramana Doddi and Yashwant D. Vankar *Tetrahedron Lett.* **2009**, *50*, 5827-5830.
115. Regio- and stereocontrolled selective debenzoylation and substitution reactions of C-2 formyl glycals. Application in the synthesis of constrained β -sugar amino acids G. K. Rawal, Shikha Rani, Nitee Kumari, and Yashwant D. Vankar *J. Org. Chem.* **2009**, *74*, 5349-5355.
114. Synthesis and glycosidase-inhibitory activity of novel polyhydroxylated quinolizidines derived from D-glycals. Nitee Kumari and Yashwant D. Vankar *Org. Biomol. Chem.* **2009**, *7*, 2104-2109.
113. Facile Aza-Claisen Rearrangement in Glycals: Application in the Synthesis of 1-Deoxy-L- iminosugars Preeti Gupta and Y. D. Vankar *Eur. J. Org. Chem.* **2009**, 1925-1933.
112. Synthesis of hybrids of 3-deoxy carbasugars with pyranoses (D-mannose and D-talose) as glycosidase inhibitors D. V. Ramana and Y. D. Vankar *Carbohydr. Research* **2009**, *344*, 606-612.
111. Efficient and stereo-divergent syntheses of D- and L-fagomines and their analogs Nitee Kumari, B. Gopal Reddy and Y.D. Vankar *Eur. J. Org. Chem.* **2009**, 160-169.
110. Synthesis of hybrids of D-glucose and D-galactose with pyrrolidine based imino sugars as glycosidase inhibitors D.V. Ramana, K. Hari Prasad, A. P. John Pal, Ranjan K. Basak and Y. D. Vankar *Eur. J. Org. Chem.* **2008**, 5731-5739.
109. HClO₄/SiO₂ catalysed synthesis of alkyl 3-deoxy-hex-2-enopyranosides from 2-hydroxy glucal ester: Application in the synthesis of a *cis*-fused bicyclic ether and a 4-amino-C-glucoside Preeti Gupta, Nitee Kumari, Aditi Agarwal and Y. D. Vankar *Org. Biomol. Chem.* **2008**, *6*, 3948-3956
108. Total Synthesis of L-(+)-Swainsonine and other Indolizidine Azasugars from D-Glucose M. Abrar Alam, Amit Kumar and Y. D. Vankar *Eur. J. Org. Chem.* **2008**, 4972-4980.
107. Total Synthesis of (+)-Lentiginosine from D-Glucose M. Abrar Alam and Y. D. Vankar *Tetrahedron Lett.* **2008**, *49*, 5534-5536.
106. Stereoselective synthesis of muco-quercitol, (+)-gala-quercitol and 5-amino-5-deoxy-D-vibo-quercitol from D-mannitol D. V. Ramana, Amit Kumar and Y. D. Vankar *Tetrahedron* **2008**, *64*, 9117-9122.
105. Mild and efficient chemoselective deprotection of anomeric O-methyl glycosides using trityl tetrafluoroborate Amit Kumar, D. V. Ramana and Y. D. Vankar *J. Org. Chem.* **2008**, *73*, 5993-5995.
104. Stereoselective synthesis of safinol and its natural stereoisomer from D-glycal K. Hariprasad, Ram Sagar and Y. D. Vankar *Tetrahedron Lett.* **2008**, *49*, 4728-4730.
103. 2-Nitroglycals as powerful glycosyl Donors: Application in the Synthesis of Biologically Important Molecules R. R. Schmidt and Y. D. Vankar *Acc. Chem. Res.* **2008**, *41*, 1059-1073.

102. Synthesis of hybrids of D-glucose and D-galactose with 1-deoxynojirimycin Analogues Using Ring Closing Metathesis
Amit Kumar, G. K. Rawal, Y. D. Vankar *Tetrahedron* **2008**, *64*, 2379-2390.
101. New method for chloroamidation of olefins. Application in the synthesis of N-glycopeptides and anticancer agents
G.K. Rawal, Amit Kumar, U. Tawar and Y. D. Vankar
Org. Lett. **2007**, *9*, 5171
100. Synthesis of new pyrrolidine based imino sugars as glycosidase inhibitors.
D. V. Ramana and Y. D. Vankar *Eur. J. Org. Chem.* **2007**, 5583-5589.
99. Conversion of glycals to 1-azido-2-iodosugars using N-iodosuccinimide/ NaN_3 (or KI/Oxone[®]) reagent systems: Application in the synthesis of methyl N-acetyl- α -D-lividiosaminide
Shikha Rani, G. K. Rawal, K. P. Madhusudanan and Y. D. Vankar
Synthesis **2007**, 294
98. Synthesis of chiral non-proteinogenic 4,5-dihydroxy tetrahydropyran derived α -amino acids from D-Mannitol
Anita Brar and Y. D. Vankar *Tetrahedron Lett.* **2006**, *47*, 9035
97. Nafion-H mediated selective deprotection of terminal isopropylidene acetals and trityl ethers. Application in the synthesis of a substituted piperidone
Shikha Rani, G. K. Rawal, Amit Kumar and Y. D. Vankar
Tetrahedron Lett. **2006**, *47*, 9117-9120
96. Hybrid sugars as glycosidase inhibitors *en-route* to 2-deoxy 2-amino C-glycosyl amino acids
K. Jayakanthan and Y. D. Vankar *Tetrahedron Lett.* **2006**, *47*, 8667-8671
95. A one pot selective deprotective acetylation of benzyl ethers and OTBDMS ethers using the $\text{BF}_3 \cdot \text{Et}_2\text{O} \cdot \text{NaI} \cdot \text{Ac}_2\text{O}$ reagent system
Anita Brar and Y. D. Vankar *Tetrahedron Lett.* **2006**, *47*, 5207
94. Ceric ammonium nitrate in carbohydrate chemistry
Aditi Agarwal and Y. D. Vankar *Proc. Ind. Nat. Sci. Acad.* **2005**, *71A*, 309
93. Synthesis of Conformationally Constrained C-Glycosyl α - and β -Amino acids and Sugar Carbamino sugar Hybrids *via* Diels-Alder Reaction
K. Jayakanthan and Yashwant D. Vankar *Org. Lett.* **2005**, *7*, 5441-5444
92. Glycosyl trichloroacetylcarbamate: A new glycosyl donor for O-glycosylation
K. Jayakanthan and Yashwant D. Vankar
Carbohydrate Research **2005**, *340*, 2688
91. $\text{Bi}(\text{OTf})_3$ and $\text{SiO}_2 \cdot \text{Bi}(\text{OTf})_3$ as Effective Catalysts for Ferrier Rearrangement
J. Lokesh Babu, Anakshi Khare and Yashwant D. Vankar
Molecules **2005**, *10*, 884-892
90. Selective deprotection of terminal isopropylidene acetals and trityl ethers using HClO_4 supported on silica gel
Aditi Agarwal and Yashwant D. Vankar *Carbohydrate Research* **2005**, *340*, 1661
89. Synthesis of novel hybrids of D-galactose with 1-deoxynojirimycin analogues as glycosidase inhibitors.
B. Gopal Reddy and Yashwant D. Vankar
Angewandte Chemie Int. Ed. **2005**, *44*, 2001-2004
88. Protic acid (HClO_4 supported on silica gel) mediated synthesis of 2,3-unsaturated-O-glucosides and a chiral furan diol from 2,3-glycals
Aditi Agarwal, Shikha Rani and Yashwant D. Vankar
J. Org. Chem. **2004**, *70*, 6137.

87. Trimethylsilylnitrate-Trimethylsilylazide: A Novel Reagent System for the Synthesis of 2-Deoxy Glycosyl Azides from Glycals: Application in the Synthesis of 2-Deoxy-beta-N-glycopeptides
B. Gopal Reddy, K.P. Madhusudanan and Yashwant D. Vankar
J. Org. Chem. **2004**, *70*, 2630.
86. Trimethylsilylnitrate: A useful reagent for direct synthesis of 2-deoxy-O-glycosides from glycals
B. Gopal Reddy and Yashwant D. Vankar *ARKIVOC* **2004**, Part (viii), 12-19.
85. NaNO₂-Ceric Ammonium Nitrate Mediated Conversion of Acrylic Esters and Baylis-Hillman derived Acrylic Esters into corresponding β-Nitro Acrylic Esters
K. Jayakanthan, K.P. Madhusudanan and Yashwant D. Vankar
Tetrahedron **2004**, *60*, 397-403.
84. LaCl₃·7H₂O/NaI/Benzyl Alcohol: A novel reagent system for regioselective hydration of glycals: Application in the synthesis of 1,6-dideoxynojirimycin.
Shikha Rani, Aditi Agarwal and Yashwant D. Vankar
Tetrahedron Lett. **2003**, *44*, 5001.
83. A convenient synthesis of methyl N-acetyl-α-D-lividosaminide from D-glucal
B. Gopal Reddy and Yashwant D. Vankar *Tetrahedron Lett.* **2003**, *44*, 4765-4767.
82. An efficient one step dihydroxylation of 1,2-glycals with oxone in acetone.
Shikha Rani, Y.D. Vankar *Tetrahedron Lett.* **2003**, *44*, 907-909.
81. Selective Deprotection of tert.-Butyldimethylsilyl Ethers using Nafion--H/ Sodium Iodide (or Bromodimethylsulfonium Bromide) in Methanol
Shikha Rani, J. Lokesh Babu and Yashwant D. Vankar
Synth. Commun. **2003**, *33*, 4043.
80. Ytterbium triflate (and trimethylsilyl triflate) catalysed isomerisation of glycidic esters to α-hydroxy-β,γ-unsaturated esters and their conversion into cyclopentanoids using Johnson-Claisen rearrangement
R. Kumarewaran, S.P. Shahi, S. Rani, A. Gupta, K.P. Madhusudanan, Y.D. Vankar
ARKIVOC **2002**, **126-135**.
79. An easy route to 2-amino-β-C-glycosides via conjugate addition to 2-nitro glycals
K. Pachamuthu, A. Gupta, J. Das, R.R. Schmidt, Y.D. Vankar
Eur. J. Org. Chem. **2002**, (9), 1479-1483.
78. Ceric Ammonium Nitrate Catalyzed Tetrahydropyranylation of Alcohols and Synthesis of 2-Deoxy-O-Glycosides
K. Pachamuthu, Y.D. Vankar *J. Org. Chem.* **2001**, *66*, 7511-7513.
77. Nafion-H catalyzed Mukaiyama aldol condensations and hetero Diels-Alder reactions using aldehydes and imines. Part 15: General synthetic methods
B. Gopal Reddy, R. Kumareswaran, Y.D. Vankar
Tetrahedron Letters **2001**, *42*, 7493.
76. Short syntheses of (-)-Coniine and Pipecoline via ring closing metathesis.
K. Pachamuthu and Y.D. Vankar *J. Organomet. Chem.* **2001**, *624*, 359.
75. Preparation of 3-trifluoromethyl-2-cycloalkenones by the oxidative rearrangement of trifluoromethylated allylic alcohols with pyridinium chlorochromate
G.K. SuryaPrakash, E.C. Tongco, T. Mathew, Y.D. Vankar, G.A. Olah
J. Fluorine Chemistry **2000**, *101*, 199.
74. Indium Trichloride: A useful catalyst for Ionic Diels-Alder reaction.
B. Gopal Reddy, R. Kumareswaran, Y.D. Vankar
Tetrahedron Letters **2000**, *41*, 10333.
73. Nafion H mediated acetylation of alcohols.
R. Kumareswaran, K. Pachamuthu and Y.D. Vankar *Synlett* , **2000**, 1652.

72. Synthesis of C-2 methylene O- and C-glycosides and sugar derived α -methylene- δ -valerolactones from C-2-actoxymethyl glycals.
A. Gupta and Y.D. Vankar *Tetrahedron* **2000**, *56*, 8525-8531.
71. Chemistry of glycosphingolipids-Carbohydrate molecules of biological significance.
Y.D. Vankar and R.R. Schmidt *Chemical Society Reviews* **2000**, 201.
70. Trimethylsilylnitrate-chromium trioxide and trimethylsilylnitrate-DMSO: novel reagent system for one step conversion of olefins into α -nitro ketones and cyclic ethers into lactones.
S. P. Shahi, A. Gupta, S. V. Pitre, M. V. Reddy, R. Kumareswaran and Y. D. Vankar, *J. Org. Chem.*, **1999**, *64*, 4509.
69. Nafion-H catalysed isomerisation of glycidic esters to α -hydroxy- β,γ -unsaturated esters: Application in the synthesis of a trifluoromethylated vinylic epoxide.
M. Hachoumy, T. Mathew, E.C. Tongco, Y.D. Vankar, G.K.S. Prakash, G.A. Olah *Synlett* **1999**, 363.
68. Zeolite (H-ZSM 5) catalysed regio and stereoselective reeduction of 2,3-epoxy alcohols to 1,2-diols and vinylic epoxides to homoallylic alcohols with sodium cyanoborohydride.
A. Gupta, and Y.D. Vankar *Tetrahedron Lett.* **1999**, *40*, 1369.
67. Studies in Lewis acid and LiClO₄ (or Nafion-H) catalysed ionic Diels-Alder reactions of chiral and achiral olefinic acetals respectively.
R. Kumareswaran, P.S. Vankar, M.V. Ram Reddy, R. Roy and Y.D. Vankar *Tetrahedron* **1999**, *55*, 1099.
66. Nef reaction of benzylic and secondary nitro compounds using bis(trimethyl silyl)peroxide.
S.P. Shahi and Y.D. Vankar *Synth. Commun.* **1999**, *29*, 4321.
65. Stereo and regioselective palladium catalysed reduction of Baylis-Hillman products.
K. Pachamuthu and Y.D. Vankar *Tetrahedron Lett.* **1998**, *39*, 5439.
64. Applications of trimethylsilyl halides-oxidants combinations in organic synthesis.
P.S. Vankar, M.V. Ram Reddy and Y.D. Vankar, *Org. Prep. Proc. Int.* **1998**, *30* (4), 373. [*Invited Review Article*]
63. Palladium catalysed reactions of Baylis-Hillman products: Synthesis of some useful intermediates.
R. Kumareswarn and Y.D. Vankar *Synth. Commun.* **1998**, *28*, 2291.
62. Recent developments in ionic Diels-Alder reaction.
(An article in honour of Prof. Sukh Dev in a special issue of the journal)
R. Sanghi, P.S. Vankar, and Y.D. Vankar *J. Indian Chem. Soc.* **1998**, *75* 709.
61. Preparation, NMR and AB INITIO/IGLO/GIAO-MP₂ study of the elusive protonated fluorocarbonyl carbocation.
G.A. Olah, A. Burichter, T. Mathew, Y.D. Vankar, G. Rasul, and G.K.S. Prakash *Angew. Chemie. Int. Ed. in Engl.* **1997**, *36*, 1871.
60. Palladium catalysed allylic substitution via *in situ* activation of allylic alcohols.
R. Kumareswarn, and Y.D. Vankar *Tetrahedron Lett.*, **1997**, *38*, 8421.
59. Zeolite (H-ZSM-5) catalysed oxidation of alcohols with chromium trioxide.
S.V. Pitre, M.V. Ram Reddy and Y.D. Vankar *J. Chem. Res.* **1997**, 462.
58. Chlorotrimethylsilane catalysed acylation of alcohols.
R. Kumareswaran, A. Gupta, and Y.D. Vankar *Synth. Commun.* **1997**, *27*, 277.
57. Acetoxyselenation of olefins with selenium dioxide-acetic anhydride reagent system.
S.V. Pitre, M.V. Ram Reddy, Y.D. Vankar and K.P. Madhusudanan *Synth. Commun.* **1997**, *27*, 267.
56. Zeolite (H-ZSM-5) catalysed reduction of conjugated nitroolefins with sodium cyanoborohydride.

- A. Gupta, A. Haque and Y.D. Vankar
J. Chem. Soc., Chem. Commun. **1996**, 1653.
55. Synthesis of chiral vinylic epoxides and α -hydroxy- β,γ -unsaturated esters via (-)-menthol based auxiliary and enzymatic resolution respectively.
P.S. Vankar, I. Bhattacharya and Y.D. Vankar
Tetrahedron:Asymmetry **1996**, 7, 1683.
54. Zeolite (H-ZSM-5) catalysed regioselective isomerisation of glycidic esters to α -hydroxy- β,γ -unsaturated esters.
M.V. Ram Reddy, S.V. Pitre, I. Bhattacharya and Y.D. Vankar
Synlett **1996**, 241.
53. Palladium catalysed conversion of vinyl bromoallylic alcohols into corresponding vinylic aldehydes (or ketones) and oxidation of secondary alcohols to ketones.
S.V. Pitre, P.S. Vankar and Y.D. Vankar *Tetrahedron* **1996**, 52, 12291.
52. A novel one pot synthesis of α -nitroketones from olefins using trimethylsilyl-nitrate-chromium trioxide reagent system.
M.V. Ram Reddy, R. Kumareswaran and Y.D. Vankar
Tetrahedron Lett. **1995**, 36, 7149.
51. A one step conversion of olefins into α -azidoketones using azidotrimethylsilane-chromium trioxide.
M.V. Ram Reddy, R. Kumareswaran and Y.D. Vankar
Tetrahedron Lett. **1995**, 36, 6751.
50. A novel one pot nitroacetamidation of olefins using ceric ammonium nitrate-sodium nitrate-acetonitrile reagent system.
M.V. Ram Reddy, B. Mehrotra, and Y.D. Vankar
Tetrahedron Lett. **1995**, 36, 4861.
49. Reactions of 2-phenylthio-2-cycloalkenones and 2-[phenylthio(methyl)]-2-cycloalkenones: Synthesis of some useful chiral and achiral intermediates.
Y.D. Vankar, G. Kumaravel, I. Bhattacharya, P.S. Vankar, and K. Kaur,
Tetrahedron **1995**, 51, 4829.
48. Chiral acetals in organic synthesis. Regioselective synthesis of 2- and 3-hydroxy acetals from 2,3-olefinic acetals: Reinvestigation and further applications.
Y.D. Vankar, N.C. Chaudhuri and M.V. Ram Reddy
Tetrahedron **1994**, 50, 11057.
47. A convenient synthesis of vinyl epoxides from glycidic esters via α -hydroxy- β,γ -unsaturated esters.
I. Bhattacharya, K. Shah, P.S. Vankar and Y.D. Vankar
Synth. Commun. **1993**, 23, 2405.
46. Development of newer synthetic methodologies in organic synthesis.
Y.D. Vankar
J. Indian Chem. Soc. **1992**, 67, 6 (Award Lecture)
45. Synthesis of β -O-glycosides using enol ether and imidate derived leaving groups. Emphasis on the use of nitrile as solvent.
Y.D. Vankar, P.S. Vankar, M. Behrendt and R.R. Schmidt
Tetrahedron **1991**, 47, 9985.
44. Preparation of α -nitroepoxides: Preparation of useful intermediates via nucleophilic ring opening of α -nitroepoxides.
Y.D. Vankar, K. Shah, A. Bawa and S.P. Singh
Tetrahedron **1991**, 47, 8883.

43. Facile conversion of tetrahydropyranylated alcohols to the corresponding bromides and iodides using metal halides and chlorotrimethylsilane (or boron trifluoride etherate).
Y.D. Vankar and K. Shah *Tetrahedron Lett.* **1991**, 32, 1081.
42. Reactions of 2-nitro and 3-nitro olefinic acetals: Preparation of useful synthetic intermediates.
Y.D. Vankar, G. Kumaravel and A. Bawa *Tetrahedron* **1991**, 47, 2027.
41. Synthesis of functionalised bicyclic α -methylene- γ -butyrolactones via radical cyclisation approach.
Y.D. Vankar and N.C. Chaudhuri *Synth. Commun.* **1991**, 21, 885.
40. Preparation of H(3) isomerization of C(15)-substituted Deplanchine derivatives. Synthesis of Geissoschizol and Geissoschizine.
E. Wenkert, M. Guo, M.J. Pestchanker, Y.-J. Shi and Y.D. Vankar *J. Org. Chem.* **1989**, 54, 1166.
39. A facile conversion of α -nitroepoxides into 1,2-diones and α -iodoketones.
Y.D. Vankar, R.K. Saksena and A. Bawa *Chemistry Lett.* **1989**, 1241.
38. Regioselective isomerisation of glycidic esters with boron trifluoride ether (or chlorotrimethylsilane) into α -hydroxy- β,γ -unsaturated esters.
Y.D. Vankar, N.C. Chaudhuri and P.S. Vankar *J. Chem. Res.* **1989**, 178.
37. Ritter reaction with cyclopropyl ketones and cyclopropyl alcohols: Synthesis of N-acyl- γ -keto and N-acylhomoallyl amines.
Y.D. Vankar, G. Kumaravel and C.T. Rao *Synth. Commun.* **1989**, 19, 2181.
36. Regioselective reductions of 2,3-epoxy acetals with Zn-ClSiMe_3 and LiAlH_4 : Convenient synthesis of 1,2- and 1,3-diones.
Y.D. Vankar, N.C. Chaudhuri and C.T. Rao *Tetrahedron Lett.* **1987**, 28, 551.
35. Sodium iodide/ Chlorotrimethylsilane (boron trifluoride etherate) or zinc-chlorotrimethylsilane: Mild reagent systems for the conversion of enediones into 1,4-diketones.
Y.D. Vankar, G. Kumaravel, N. Mukherjee and C.T. Rao *Synth. Commun.* **1987**, 17, 181.
34. Carbon-carbon bond forming additions to 1-alkyl-3-acylpyridinium salts.
E. Wenkert, E.C. Angell, J. Drexler, P.D.R. Moeller, J.St. Pyrek, Y. Shi, M. Sultana and Y.D. Vankar *J. Org. Chem.* **1986**, 51, 2995.
33. Palladium catalysed isomerisation of 2,3-epoxyalcohols to α - and β -hydroxy ketones.
Y.D. Vankar, N.C. Chaudhuri and S.P. Singh *Synth. Commun.* **1986**, 16, 1621.
32. Palladium(0) catalysed isomerisation of α -nitroepoxides into 1,2-diketones.
Y.D. Vankar and S.P. Singh *Chemistry Lett.* **1986**, 1939.
31. $\text{NaI/BF}_3 \cdot \text{Et}_2\text{O}$: A mild reagent for the conversion of benzylic and allylic alcohols into iodides and sulfoxides into sulfides.
Y. D. Vankar and C.T. Rao *Tetrahedron Lett.* **1985**, 26, 2717.
30. Reaction of sulfoxides with nitriles in the presence of trifluoroacetic anhydride and trifluoroacetic acid: A case of Ritter reaction on Pummerer intermediate.
Y. D. Vankar and C.T. Rao *Tetrahedron* **1985**, 41, 3405.
29. A simple synthesis of 3-nitrocyclohexenones and their acetals.
Y.D. Vankar and A. Bawa *Synth. Commun.* **1985**, 15, 1253.
28. Selective cleavage of benzyl ethers using boron trifluoride etherate-sodium iodide reagent system. Y. D. Vankar and C.T. Rao *J. Chem. Res.* **1985**, 232.
27. N-chlorosuccinimide/sodium iodide: A convenient source of N-iodosuccinimide. Synthesis of α -iodocarbonyl compounds and trans-1,2-iodoacetates.
Y.D. Vankar and G. Kumaravel *Tetrahedron Lett.* **1984**, 25, 233.
26. Synthesis of 2H-1,3-benzothiazines via a modified Ritter reaction.
Y.D. Vankar and D.K. Thakur *Synthesis* **1983**, 223.

25. Zinc/Chlorotrimethylsilane: A novel reducing system for the conversion of epoxides into alcohols.
Y.D. Vankar, P.S.S. Arya and C.T. Rao *Synth. Commun.* **1983**, *13*, 869.
24. Reduction of sulfoxides to sulfides by chlorosulfonyl isocyanate/sodium iodide.
K.S. Keshavamurthy, Y.D. Vankar and D.N. Dhar
Indian J. Chem. **1983**, *22B*, 504.
23. Preparation of acid anhydrides, amides and esters using chlorosulfonyl isocyanate as a dehydrating agent.
K.S. Keshavamurthy, Y.D. Vankar and D.N. Dhar *Synthesis* **1982**, 506.
22. Reaction of benzenesulphenyl chloride with α,β -unsaturated compounds.
N.N. Bhongle, V.N. Gogte and Y.D. Vankar
Indian J. Chem. **1982**, *21B*, 724.
21. A short synthesis of (\pm)-Yohimbine.
E. Wenkert, J.St. Pyrek, S. Uesato and Y.D. Vankar
J. Am. Chem. Soc. **1982**, *104*, 2244.
20. Short syntheses of Hirsutine and Geissoschizine.
E. Wenkert, Y.D. Vankar and J.S. Yadav *J. Am. Chem. Soc.* **1980**, *102*, 7971.
19. Improved transformation of nitro compounds into carbonyl compounds by hydrogen peroxide/potassium carbonate.
G.A. Olah, M. Arvanaghi, Y.D. Vankar and G.K.S. Prakash *Synthesis* **1980**, 662.
18. Deoxygenation of pyridine N-oxides with sodium iodide-trimethyl(ethyl)amine-/sulfur dioxide complexes.
G.A. Olah, M. Arvanaghi and Y.D. Vankar *Synthesis* **1980**, 660.
17. Reduction of α -haloketones with sodium iodide/chlorotrimethylsilane.
G.A. Olah, M. Arvanaghi and Y.D. Vankar *J. Org. Chem.* **1980**, *45*, 3531.
16. Dimethyl sulfoxide/chlorosulfonyl isocyanate: An extremely mild reagent for oxidation of alcohols to carbonyl compounds.
G.A. Olah, Y.D. Vankar and M. Arvanaghi *Synthesis* **1980**, 141.
15. Mild fragmentative C-C bond cleavage of α -hydroxyketoximes with trifluoromethanesulfonic anhydride, trifluoroacetic anhydride or trifluoromethane sulfonyl chloride.
G.A. Olah, Y.D. Vankar and A.L. Berrier *Synthesis* **1980**, 45.
14. Deoxygenation of sulfoxides with sodium iodide/iodine/trimethyl(ethyl)amine-/sulfur dioxide or sodium iodide/pyridine/sulfur trioxide complexes. G.A. Olah, Y.D. Vankar and M. Arvanaghi *Synthesis* **1979**, 984.
13. Conversion of epoxides and enamines into α -haloketones using halodimethylsulfonium halides.
G.A. Olah, Y.D. Vankar and M. Arvanaghi *Tetrahedron Lett.* **1979**, 3635.
12. Formic anhydride.
G.A. Olah, Y.D. Vankar, M. Arvanaghi and J. Sommer
Angew. Chemie Int. Ed. **1979**, *18*, 614.
11. Oxidation of thiols to disulfides with bromodimethylsulfonium bromide.
G.A. Olah, M. Arvanaghi and Y.D. Vankar *Synthesis* **1979**, 721.
10. Dethioacetalization with bromodimethylsulfonium bromide.
G.A. Olah, Y.D. Vankar, M. Arvanaghi and G.K.S. Prakash
Synthesis **1979**, 720.
9. Pyridinium polyhydrogen fluoride (30% pyridine-70% hydrogen fluoride), a convenient reagent organic fluorination reactions,
G.A. Olah, J.T. Welch, Y.D. vankar, M. Nojima, I. Kerekes and J.A. Olah
J. Org. Chem. **1979**, *44*, 3872.

8. Preparation of nitriles from amides and aldoximes with chlorosulfonyl isocyanate, an effective and mild dehydrating agent.
G.A. Olah, Y.D. Vankar and A. Garcia-Luna *Synthesis* **1979**, 227.
7. Oxidative cleavage of ketoximes and tosylhydrazones with aqueous bromine.
G.A. Olah, Y.D. Vankar and G.K.S. Prakash *Synthesis* **1979**, 113.
6. Reduction of α -haloketones with sodium iodide/trimethyl(ethyl)amine-sulfur dioxide or pyridine-sulfur trioxide complexes.
G.A. Olah, Y.D. Vankar and A.P. Fung *Synthesis* **1979**, 59.
5. Novel conversion of primary aliphatic and arylaliphatic nitro compounds into nitriles with trimethyl (ethyl) amine-sulfur dioxide complexes or hexamethylphosphorous triamide.
G.A. Olah, Y. D. Vankar and B.G.B. Gupta *Synthesis* **1979**, 36.
4. Preparation of nitriles via dehydration of aldoximes with trimethylamine-sulfur dioxide complex.
G.A. Olah and Y. D. Vankar *Synthesis* **1978**, 702
3. Synthesis of 1,4-oxathian-2-one, 5-methyl-1,4-oxathian-2-one and 1,4-oxathiepan-2-one.
D.I. Davies, L. Hughes, Y.D. Vankar and J.E. Baldwin
J. Chem. Soc. Perkin Trans. I **1977**, 2476.
2. Tautomerism in 2-arylaminomethylene cycloalkenones.
V.N. Gogte, C.I. Jose, A.G.Namjoshi, Y.D. Vankar and B.D.Tilak
Indian J. Chem. **1977**, 15B, 778.
1. Synthesis of hetrocyclic compounds: Tetrahydrophenanthridines, tetrahydro acridines and hydroxyacridines.
Y. D. Vankar, V. N. Gogte and B. D. Tilak *Indian J. Chem.* **1977**, 15B, 411.