

Dr. Anil V. Karnik

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ACADEMIC RECORD

Degree	Subject	University	Year
Ph.D.	Organic Chemistry	Bombay University	1989
M Sc.	Organic Chemistry	Bombay University	1982

AWARDS / HONORS

No.	Name of the award	Year
1	Performance Based Incentive Award [University of Mumbai]	2009

AREA OF RESEARCH INTEREST

Enantioselective syntheses, Kinetic resolutions, Chiral molecular recognition, Group Transfer Reactions, Synthetic organic chemistry.

NUMBER OF STUDENTS GUIDED

Ph.D. : 07
M.Sc.(By Research) : 18

RESEARCH PROJECTS

No	Title of the project	Funding Agency	Grant Received (Rs.)	Project duration
1	Development of C ₂ symmetric hetero-helicenes as fluorescent chiral sensor for amines and amino esters	DST	28,42,800/	2008-2011
2	Kinetic Resolution of Amines using N-acyl (S)-2-(1-hydroxyethyl)benzimidazole in presence of Lewis acid catalyst	University of Mumbai	25,000/	2003-2004
3	Synthesis of new chiral β-keto sulfoxides containing 1,3,4-oxadiazole moiety and asymmetric synthesis of substituted methyl carbinols	University of Mumbai	40,000/	2000-2001

RESEARCH PUBLICATIONS

1. "Ionic Liquid Promoted Diels-Alder Reaction Between Anthrone and Maleimides", Nitin A. Mirgane, Sandip B. Kotwal and Anil V. Karnik, *Cent. Eur. J. Chem.*, **8**, 356-360, (2010).
2. "Chiral Ionic Liquid Mediated Diels-Alder Reaction Between Anthrone Enolate and Maleimides", Nitin A. Mirgane, Mohammed Hasan H. Akhtar and Anil V. Karnik, *Letters in Org. Chem.*, **7**, 343-347, (2010).
3. "Cascade Enantioselective Synthesis of 3-arylphthalides using Chiral Auxiliary Route", Anil V. Karnik and Suchitra S. Kamath, *Synthesis*, No. 12, 1832-1834, (2008).
4. "Synthesis and in vitro antibacterial evaluation of tetracyclic-ortho-fused 4Hnaphtho[1',2'-5,6]pyrano[3,4-d](1,2,3)selenodiazole and its derivatives.", A. V. Karnik, A. M. Kulkarni, N. J. Malviya and B. L. Jadhav, *European Journal of Medicinal Chemistry*, **43**, 2615-2617, (2008).

5. "Cascade enantioselective synthesis of γ -aryl- γ -butyrolactones with a delayed stereoselective step", Anil V. Karnik and Suchitra S. Kamath, *Tetrahedron*, **64**, 2992-2996, (2008).
6. "Enantioselective benzylation of racemic amines using chiral benzimidazolide as benzoylating agent", Anil V. Karnik and Suchitra S. Kamath, *Tetrahedron:Asymmetry*, **19**, 45-49, (2008).
7. "Enantioselective Benzylation of α -Amino Esters Using (S)-1-Benzoyl-2-(racetoxyethyl) benzimidazole, a Chiral Benzimidazolide", Anil V. Karnik* and Suchitra S. Kamath, *J. Org. Chem.*, **72**, 7435-7438, (2007).
8. "Furo-Fused BINOL Based Crown as a Fluorescent Chiral Sensor for Enantioselective Recognition of Phenylethylamine and Ethyl Ester of Valine", Sunil P. Upadhyay, Raghuvir R. S. Pissurlenkar, Evans C. Coutinho, and Anil V. Karnik*, *J. Org. Chem.*, **72**, 5709-5714, (2007).
9. "Cascade Synthesis of Racemic 3-Arylphthalides", S T Patil & A V Karnik, *Indian J Chem., Sec. B.*, **46B**, 710-712, (2007).
10. "Enantioselective Synthesis of (R) and (S)- [9,9]bi[naphtho(2,1-b)furanyl]-8,8 -diol, a furo-fused BINOL Derivative", *Tetrahedron Letters*, **48**, 317-318, (2007).
11. "[9,9']Bi[naphtho(2,1-b)furanyl]-8,8'-diol, a furo-fused BINOL derivative: synthesis, resolution and determination of absolute configuration", Anil V. Karnik, Sunil P. Upadhyay and Manish G. Gangrade, *Tetrahedron: Asymmetry*, **17**, 1275-1280, (2006).
12. "Synthesis and in-vitro antibacterial activity of novel heterocyclic derivatives of 18-nor-equilenin" A. V. Karnik, N. J. Malviya, A. M. Kulkarni, and B. L. Jadhav, *European Journal of Medicinal Chemistry*, **41**, 891-895, (2006).
13. "Synthesis and Antibacterial studies of 6-Aryl-2,2a-dihydronaphthop[2',1-5,6]pyrano[4,3-e] [1,2,4]triazolo[3,4-b][1,3,4] thiadiazine and its derivatives", A. V. Karnik, N. J. Malviya, A. M. Kulkarni, D. Jaimini and B. L. Jadhav, *Journal of Heterocyclic Chemistry*, **43**, 489-493, (2006).
14. "Rapid and Efficient microwave-assisted synthesis of 4-amino-3-mercapto-5-substituted-1,2,4-triazoles", S. S. Joshi and A. V. Karnik, *Indian J Chem.*, **45 B**, 1057-1059, (2006).
15. "Chemoselective synthesis of heterocyclic derivatives of 18-nor-equilenin, 16-substituted-12H-11-oxa-17-thia-cyclopenta[a]phenanthrene and their in-vitro evaluation of antibacterial and antifungal activity", N. J. Malviya, A. M.

- Kulkarni, D. Jaimini, B. L. Jadhav & A. V. Karnik, *Indian J Chem.*, **45B**, 1499-1503, (2006).
16. "Synthesis of Tweezers incorporating 2-mercapto-5-aryl-1,3,4-oxadiazoles as heterocyclic subunits"; A. D. Pandey and A. V. Karnik, *Indian J. Het. Chem.*, **14**, 213-216, (2005).
 17. "A Convenient Route to Optically active γ -substituted- γ -lactones" Anil V. Karnik, Sudhir T. Patil, Subodh Patnekar and Abha Semwal, *New Journal of Chemistry*, **28**, 1420-1422, (2004).
 18. "Synthesis of new ortho fused tetracyclic-2-substituted-4H-thiazolo[5,4-c]naphtho[1,2-e]pyran and its derivatives", A. M. Kulkarni, N. J. Malviya & A. V. Karnik, *Indian J Chem.*, **43B**, 839-842, (2004).
 19. "Group Transfer reactions using N-Aroylbenzotriazoles" A. V. Karnik & A. S. Kadiri Yasmeen, *Indian J. Het. Chem.*, **14**, 61-62, (2004).
 20. "Aluminum Chloride-Mediated Kinetic Resolution of Racemic γ -Substituted- γ -Lactones", Sudhir T. Patil & Anil V. Karnik, *Chirality*, **16**, 336-338, (2004).
 21. "Facile synthesis of novel fluorescence active 12H-benzo[e]indolo[3,2-b]benzofuran and its derivatives", A. V. Karnik & S. P. Upadhyay, *Indian J Chem.*, **43B**, 1345-1346, (2004).
 22. "Facile Conversion of Acyldithiocarbazine Salts to 1,3,4-Oxadiazole Derivatives Under Microwave Irradiation", Sachin Joshi & A. V. Karnik, *Syn. Comm.*, **32**, 111-114, (2002).
 23. "Group Transfer Reactions using Benzimidazolides", A. V. Karnik & J. P. Rane, *Indian J. Chem.*, **37B**, 1191-1193, (1998).
 24. "Polyphosphoric Acid and Anhydrous Aluminium Chloride catalysed Novel Rearrangements of 1,5-Diaroylcarbohydrazides", A. V. Karnik & R. G. Kamath, *Indian J. Chem.*, **36B**, 803-804, (1997).
 25. "Polyphosphoric Acid (PPA) Catalysed Reactions of 1-Acetyl-2-Aroylhydrazines: Formation of 1,3,4-Oxadiazole Derivatives", A. V. Karnik & R. G. Kamath, *Indian J. Het. Chem.*, **6**, 141-142, (1996).
 26. "Aroylation of Active Methylene Compounds Using Imidazolides", A. V. Karnik & D. M. Rane, *Indian J. Het. Chem.*, **6**, 123-126, (1996).
 27. "Thiocarbazine acids: Interaction of carbonoxysulphide with thiosemicarbazides-Synthesis of β -(thiocarbamyl)thiocarbazinates and 1,3,4-

oxadiazole and 1,2,4-triazole derivatives", M. S. Chande, A. V. Karnik, A. N. Inamdar & S. D. Damle, *Indian J Chem.*, **30B**, 430-432, (1991).

28. "Thiocarbazinic acids Part-III. Synthesis of 1,2,4-Triazole derivatives", M. S. Chande & A. V. Karnik, *J Indian Chem. Soc.*, **67**, 776-777, (1990).

PAPERS PRESENTED IN VARIOUS CONFERENCES / SYMPOSIUM

Worked as a Secretary for:

"International Conference on Supramolecular Chemistry and Nnaomaterials" held between Feb. 14-16, 2011 at the Department of Chemistry, University of Mumbai.

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Life member Chemical Research Society of India (LM 11951)