

Sergey A. Kozmin

Department of Chemistry
University of Chicago
5735 S. Ellis Ave
Chicago, IL 60637
Phone: 773 702 6886
Fax: 773 702 0805
E-mail: skozmin@uchicago.edu
Web: <http://chemistry.uchicago.edu/fac/kozmin.html>
<http://kozmin-group.uchicago.edu>

Born: July 30, 1971
Moscow, Russia

Education

- 1998 Ph.D. in Organic Chemistry
 University of Chicago, Chicago, Illinois
- 1993 Diploma with Honors in Chemistry
 Lomonosov Moscow State University, Moscow, Russia

Research Experience and Positions

- 2006-present Associate Professor
 University of Chicago
- 2008-present Director
 Chicago Tri-Institutional Center for Chemical Methods and Library Development
- 2000-2006 Assistant Professor
 University of Chicago
- 1998-2000 Postdoctoral Associate with Professor Amos B. Smith, III
 University of Pennsylvania, Philadelphia, Pennsylvania
- 1993-1998 Graduate Research Assistant with Professor Viresh H. Rawal
 University of Chicago, Chicago, Illinois
- 1991-1993 Undergraduate Research Assistant with Professor Irina P. Beletskaya
 Lomonosov Moscow State University, Moscow, Russia

Honors and Awards

- 2008 Magomedov-Scherbinina Memorial Prize, University of Rochester
- 2007 Novartis Chemistry Lectureship
- 2006 SSOCJ Lectureship Award, Japan
- 2005 GlaxoSmithKline Chemistry Research Scholar
- 2005 NSF CAREER Award
- 2004 Camille Dreyfus Teacher-Scholar Award
- 2004 Amgen Young Investigator's Award
- 2004 American Cancer Society Research Scholar
- 2003 Alfred P. Sloan Fellow
- 1998 Elizabeth R. Norton Prize for Excellence in Graduate Research
- 1993 Diploma with Honors, Moscow State University

Research Interests

Organic Synthesis, Chemical Biology, Medicinal Chemistry, Drug Discovery

Publications

1. Kozmin, S. A.; Bumagin, N. A.; Beletskaya, I. P. Vilsmeier Formylation of Aromatic Organomercury Compounds. *Russ. Chem. Bull.* **1993**, *42*, 584-585
2. Kozmin, S. A.; Rawal, V. H. Preparation and Diels-Alder Reactivity of 1-Amino-3-siloxy-1,3-butadienes. *J. Org. Chem.* **1997**, *62*, 5252-5253
3. Kozmin, S. A.; Rawal, V. H. Asymmetric Diels-Alder Reaction Employing Chiral 1-Amino-3-siloxy-1,3-butadienes: Application to Enantioselective Synthesis of (-)- α -Elemene. *J. Am. Chem. Soc.* **1997**, *119*, 7165-7166.
4. Kozmin, S. A.; Rawal, V. H. A General Strategy to Aspidosperma Alkaloids: Efficient, Stereocontrolled Synthesis of Tabersonine. *J. Am. Chem. Soc.* **1998**, *120*, 13523-13524.
5. Kozmin, S. A.; Janey, J. M.; Rawal, V. H. 1-Amino-3-siloxy-1,3-butadienes: Highly reactive Dienes for the Diels-Alder Reaction. *J. Org. Chem.* **1999**, *64*, 3039-3052
6. Kozmin, S. A.; Rawal, V. H. Chiral Amino Siloxy Dienes in the Diels-Alder Reaction: Applications to the Asymmetric Synthesis of 4-Substituted and 4,5-Disubstituted Cyclohexenones and the Total Synthesis of (-)- α -Elemene. *J. Am. Chem. Soc.* **1999**, *121*, 9562-9573
7. Kozmin, S. A.; Green, M. T.; Rawal, V. H. On the Reactivity of 1-Amino-3-siloxy-1,3-dienes: Kinetics Investigation and Theoretical Interpretation. *J. Org. Chem.* **1999**, *64*, 8045-8047
8. Iwama, T.; Birman, V. B.; Kozmin, S. A.; Rawal, V. H. Regiocontrolled Synthesis of Carbocycle-Fused Indoles via Arylation of Silyl Enol Ethers with *o*-Nitrophenylphenyl iodonium Fluoride. *Org. Lett.* **1999**, *1*, 673-676
9. Smith, A. B., III, Kozmin, S. A.; Paone, D. Total Synthesis of (-)-Cylindrocyclophane F. *J. Am. Chem. Soc.* **1999**, *121*, 7423-7424
10. He, S. W.; Kozmin, S. A.; Rawal, V. H. Highly Diastereoselective Asymmetric Thio-Claisen Rearrangements. *J. Am. Chem. Soc.* **2000**, *122*, 190-191.
11. Janey, J. M.; Iwama, T.; Kozmin, S. A.; Rawal, V. H. Racemic and Asymmetric Diels-Alder Reactions of 1-(2-Oxazolidinon-3-yl)-3-siloxy-1,3-butadienes. *J. Org. Chem.* **2000**, *65*, 9059-9068.
12. Kozmin, S. A.; He, S. W.; Rawal, V. H. Preparation of 1-Dimethyl-3-siloxy-1,3-butadiene. *Org. Syn.* **2000**, *78*, 152-159
13. Kozmin, S. A.; He, S. W.; Rawal, V. H. [4+2] Cycloaddition of 1-Dimethyl-3-siloxy-1,3-butadiene with Methyl Acrylate: Application to the Synthesis of 1-Hydroxymethyl-2-cyclohexen-1-one. *Org. Syn.* **2000**, *78*, 160-168
14. Smith, A. B., III; Kozmin, S. A.; Adams, C. M.; Assembly of (-)-Cylindrocyclophanes A and F via Remarkable Olefin Metathesis Dimerizations. *J. Am. Chem. Soc.* **2000**, *122*, 4984-4985

15. Smith, A. B., III; Adams, C. M.; Kozmin, S. A. On the Reversible Nature of the Olefin Cross Metathesis Reaction. *J. Am. Chem. Soc.* **2001**, *123*, 990-991
16. Smith, A. B., III; Adams, C. M.; Kozmin, S. A.; Paone, D. Total Synthesis of (–)-Cylindrocyclophanes A and F Exploiting the Reversible Nature of the Olefin Cross Metathesis Reaction. *J. Am. Chem. Soc.* **2001**, *123* 5925-5937
17. Kozmin, S. A. Efficient Stereochemical Relay en Route to Leucascandrolide A. *Org. Lett* **2001**, *3*, 755-758
18. Schramm, M. P.; Reddy, D. S.; Kozmin, S. A. Siloxyalkyne-Alkene Metathesis: Rapid Access to Highly Functionalized Enones. *Angew. Chem. Int. Ed. Engl.* **2001**, *40*, 4274-4277
19. Liu, D.; Kozmin, S. A. Catalytic Enantioselective Isomerization of Silacyclopentene Oxides: New Strategy for Stereocontrolled Assembly of Acyclic Polyols. *Angew. Chem. Int. Ed. Engl.* **2001**, *40*, 4757-4759
20. Kozmin, S. A.; Iwama, T.; Huang, Y.; Rawal, V. H. An efficient Approach to Aspidosperma Alkaloids via [4+2] cycloadditions of Amino Siloxy Dienes: Stereocontrolled Total Synthesis of (+/-)-Tabersonine. Gram-scale Catalytic Asymmetric Syntheses of (+)-Tabersonine and (+)-16-Methoxytabersonine. Asymmetric syntheses of (+)-aspidospermidine and (–)-quebrachamine. *J. Am. Chem. Soc.* **2002**, *124*, 4628-4641.
21. Smith, A. B., III; Pitram, S. M.; Gaunt, M. J.; Kozmin, S. A. Dithiane Additions to Vinyl Epoxides: Steric Control over the S_N2 and S_N2' Manifolds. *J. Am. Chem. Soc.* **2002**, *124*, 14516-14517
22. Liu, D.; Kozmin, S. A. Synthesis of (–)-Pinolidoxin: Divergent Synthetic Strategy Exploiting a Common Silacyclic Precursor. *Org. Lett* **2002**, *4*, 3005-3007
23. Wang, Y.; Janjic, J.; Kozmin, S. A. Synthesis of Leucascandrolide A via a Spontaneous Macrolactolization. *J. Am. Chem. Soc.* **2002**, *124*, 13670-13671
24. Kozmin, S. A.; Wang, Y. A Three-Dimensional Array for Multiparallel Synthesis. *Angew. Chem. Int. Ed. Engl.* **2003**, *42*, 903-905
25. Kozmin, S. A.; Liu, D. Breaking the Symmetry of Silacyclic Templates to Assemble Pinolidoxin and Herbarumin I. *Strategies and Tactics in Organic Synthesis, Ed. Harmata, M.* **2004**, Vol 5. (invited submission)
26. Reddy, D. S.; Kozmin, S. A. Efficient and General Approach to Eremophilanes Using Siloxyalkyne-Alkene Metathesis. *J. Org. Chem.* **2004**, *69*, 4860-4862
27. Sweis, R.; Schramm, M. P.; Kozmin, S. A. Silver-Catalyzed [2+2] Annulations of Siloxyalkynes with Simple Enones and Enoates. *J. Am. Chem. Soc.* **2004**, *126*, 7442-7443
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29. Zhang, L.; Kozmin, S. A. Brønsted Acid-Promoted Cyclizations of Siloxyalkynes with Arenes and Alkenes. *J. Am. Chem. Soc.* **2004**, *126*, 10204-10205
30. Zhang, L.; Kozmin, S. A. Gold-Catalyzed Cycloisomerizations of Siloxy Enynes to Cyclohexadienes. *J. Am. Chem. Soc.* **2004**, *126*, 11806-11807

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33. Sun, J.; Kozmin, S. A. Brønsted Acid-Promoted Cyclizations of 1-Siloxy-1,5-diyne. *J. Am. Chem. Soc.* **2005**, *127*, 13512-13513
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37. Sun, J.; Conley, M.; Zhang, L.; Kozmin, S. A. Gold and Platinum-Catalyzed Cycloisomerizations of 1,5-Enynes to Cyclohexadienes with a Broad Alkyne Scope. *J. Am. Chem. Soc.* **2006**, *128*, 4991-4993.
38. Sun, J.; Kozmin, S. A. Silver-Catalyzed Hydroamination of Siloxy Alkynes. *Angew. Chem. Int. Ed.* **2006**, *45*, 4991-4993.
39. Zhang, L.; Sun, J.; Kozmin, S. A. Brønsted Acid-Promoted Cyclizations of Siloxy Alkynes with Unactivated Arenes, Alkenes and Alkynes *Tetrahedron* **2006**, *62*, 11371-11380. (Symposium in Print)
40. Zhang, L.; Sun, J.; Kozmin, S. A. Gold and Platinum Catalysis of Enyne Cycloisomerization. *Adv. Synth. Catal.* **2006**, *348*, 2271-2296 (Special Issue)
41. Marjanovic, J.; Kozmin, S. A. Spirofungin A: Stereoselective Synthesis and Inhibition of Isoleucyl-tRNA Synthetase. *Angew. Chem. Int. Ed.* **2007**, *46*, 9010-9013.
42. Rizvi, S. A.; Courson, D. S.; Keller, V. A.; Rock, R. S.; Kozmin, S. A. The Dual Mode of Action of Bistramide A Entails Severing of Actin Filaments and Covalent Protein Modification. *Proc. Natl. Acad. Sci. USA.* **2008**, *105*, 4088-4092.
43. Matsumoto, K.; Kozmin, S. A. Eight-Step Synthesis of Routiennocin. *Adv. Synth. Catal.* **2008**, *350*, 557-560.
44. Ulanovskaya, O.; Janjic, J.; Matsumoto, K.; Schumacker, P. T.; Kron, S. J.; Kozmin, S. A. Synthesis Enables Identification of the Cellular Target of Leucascandrolide A and Neopeltolide. *Nature Chem. Biol.* **2008**, *4*, 418-424.