



William D. Wulff

Synthetic Organic Chemistry

PROFESSOR

(b. 1949)
 B.S., 1971,
 Univ. of Wisconsin-Eau Claire;
 Ph.D., 1979,
 Iowa State Univ.;
 NIH Postdoctoral Fellow, 1979-80,
 Princeton Univ.

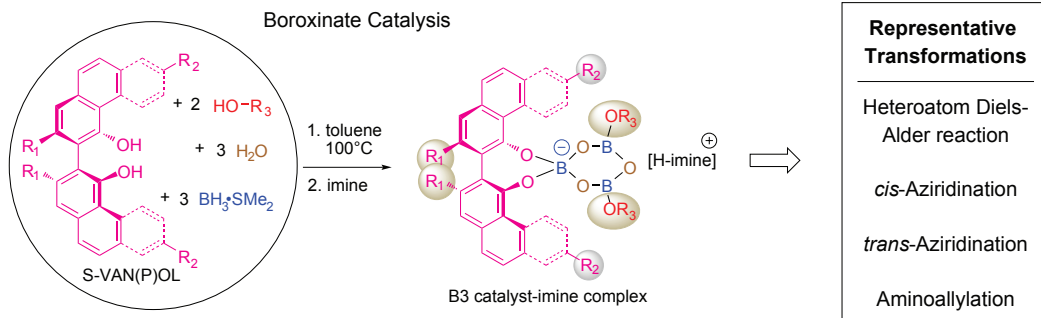
517-353-0503



Wulff Group Research is concentrated in the area of organic synthesis and catalysis. We are motivated by the pursuit of novel approaches in synthetic organic chemistry involving design and development of new asymmetric organocatalysis, organometallic chemistry, mechanistic studies and total synthesis of natural products.

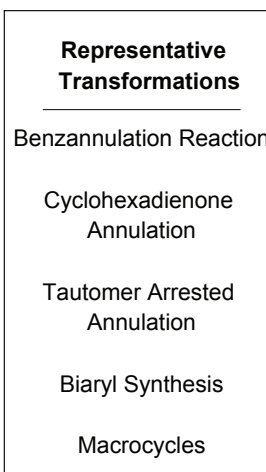
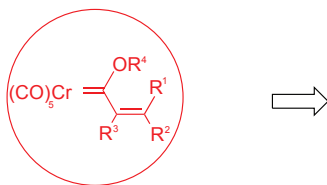
Research Field Highlights

1) New Enantioselective Organocatalysis



2) Fischer Carbene Chemistry

Fischer Carbene Complex



SELECTED PUBLICATIONS

Self-Assembly of a Library of Polyborate Chiral Anions for Asymmetric Catalysis, Desai, A. A.; Veticatt, M. J.; Guan, Y.; Odom, A. L.; Majumder, S.; Wulff, W. D. *Tetrahedron Lett.* **2015**, 56, 3481.

Catalytic Synthesis of 2H-Chromenes, Majumder, N.; Paul, N. D.; Mandal, S.; de Bruin, B.; Wulff, W. D., *ACS Catalysis* **2015**, 5, 2329-2366.

The Nature of Meso- and Pyro-borate Pre-catalysts to the VANOL and VAPOL BOROX catalysis, Zhao, W.; Yin, X.; Gupta, A. K.; Zhang, X.; Wulff, W. D., *Synlett* **2015**, 26, 1606-1614.

Catalyst Controlled Multi-Component Aziridinations of Chiral Aldehydes, Mukherjee, M.; Zhou, Y.; Dai, Y.; Gupta, A. K.; Reddy, V. R.; Staples, R. J.; Wulff, W. D., *Chem. Eur. J.* **2017**, 23, 2552-2556.

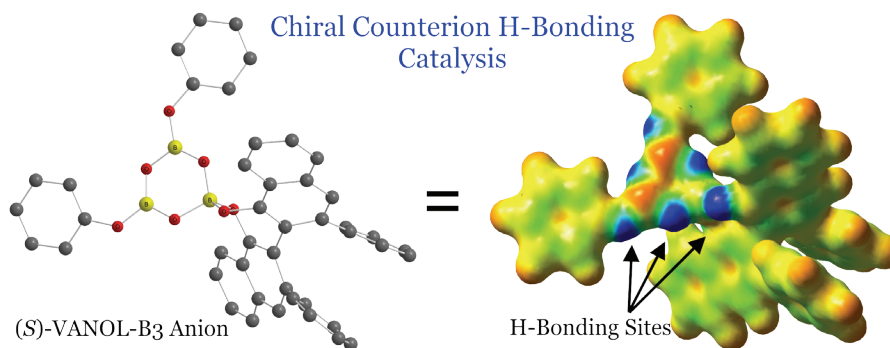
Enantioselective Palladium-Catalyzed Carbonylative Carbocyclization of Enallenes via Cross-Dehydrogenative coupling (CDC) with Terminal Alkynes: An Efficient Construction of α -Chirality of Ketones, Yang, B.; Qiu, Y.; Jiang, T.; Wulff, W. D.; Yin, X.; Zhu, C.; Backvall, J.-E., *Angew. Chem. Int. Ed.* **2017**, 56, 4535-4539.

Multi-Component Cis- and Trans-Aziridinations in the Syntheses of all Four Stereoisomers of Sphinganine, Zhou, Y.; Mukherjee, M.; Gupta, A. K.; Wulff, W. D., *Org. Lett.* **2017**, 19, 2230-2233.

Pyro-borates, Spiro-borates and Boroxinates of BINOL – Assembly, Structures and Reactivity, Hu, G.; Gupta, A. K.; Huang, L.; Zhao, W.; Yin, X.; Osminski, W. E. G.; Huang, R. H.; Wulff, W. D.; Izzo, J. A.; Veticatt, M. J., *J. Am. Chem. Soc.* **2017**, 139, 10267-10285.

Multi-Component Catalytic Asymmetric Synthesis of Trans-Aziridines, Zhou, Y.; Gupta, A. K.; Mukherjee, M.; Zheng, L.; Wulff, W. D. *J. Org. Chem.* **2017**, 82, 13121-13140.

3) Mechanistic Investigations on Organocatalysis



4) Total Synthesis of Natural Products

