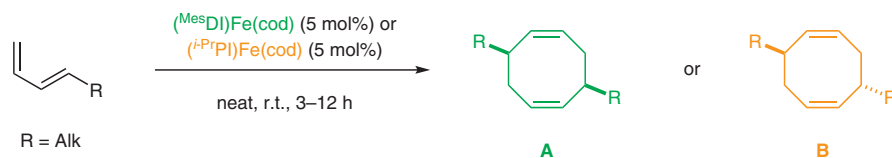


C. R. KENNEDY, H. ZHONG, R. L. MACAULAY, P. J. CHIRIK\* (PRINCETON UNIVERSITY, USA)

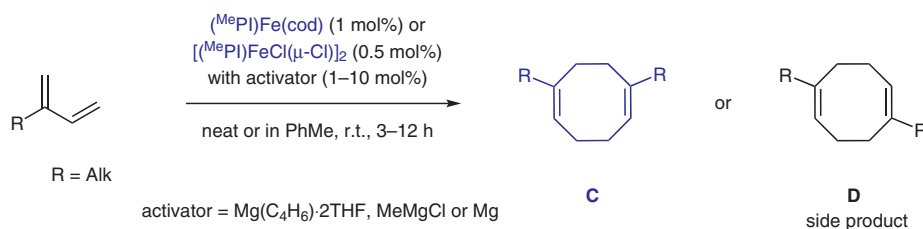
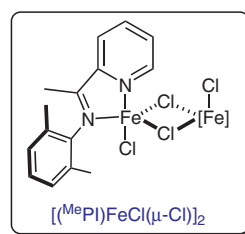
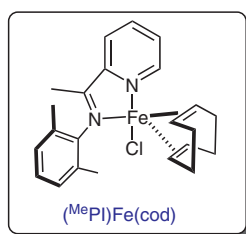
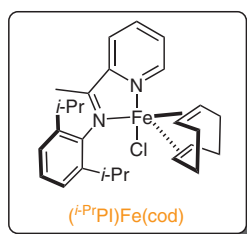
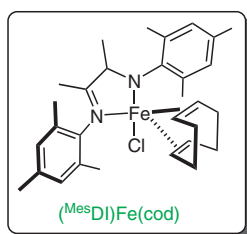
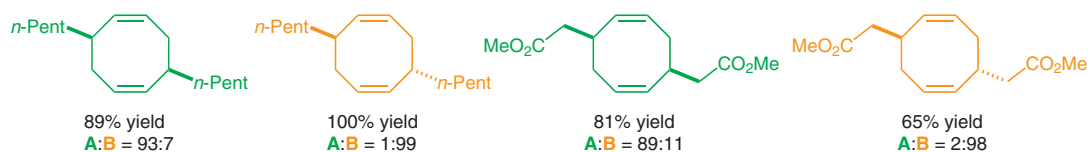
Regio- and Diastereoselective Iron-Catalyzed [4+4]-Cycloaddition of 1,3-Dienes

*J. Am. Chem. Soc.* **2019**, *141*, 8557–8573.

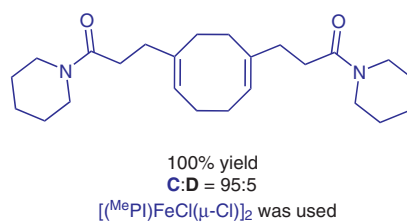
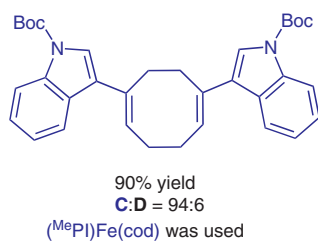
## Diastereoselective [4+4] Cycloadditions



Selected examples:



Selected examples:



**Significance:** Chirik and co-workers report a regio- and diastereoselective iron-catalyzed [4+4] cycloaddition of 1,3-dienes, leading to various substituted cyclooctadienes in excellent yields.

**Comment:** Remarkably, with the choice of the iron catalyst, the cyclodimerization can be controlled in a diastereoselective fashion. Extensive mechanistic studies were performed and catalytically relevant iron complexes were isolated and characterized.

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