

Organocatalyst Usable for the Oxidative Dimerization of Grignard Reagents



1,2-Bis[2,3,5,6-tetrafluoro-4-(trifluoromethyl)-phenyl]-3,3,4,4,5,5-hexafluoro-1-cyclopentene

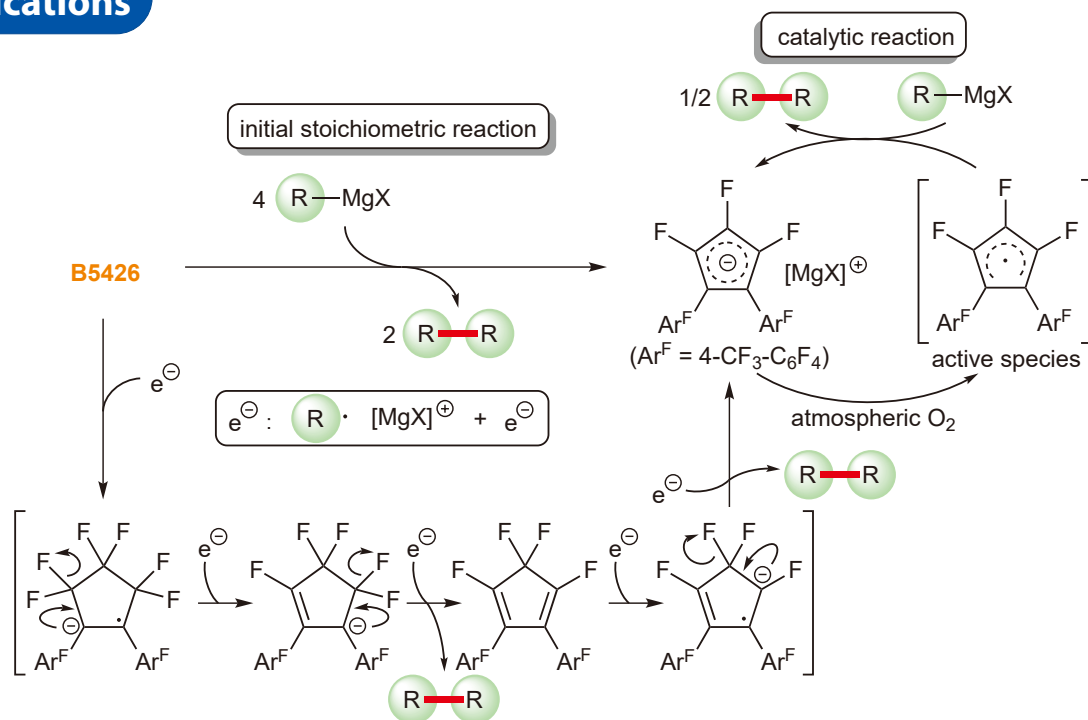
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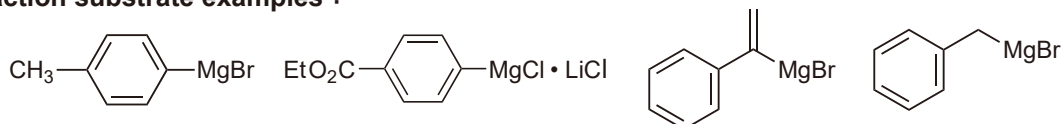
Advantages

- Four-electron oxidant transitions from stoichiometric reaction to catalytic reaction
- Effective for the dimerization of grignard reagents using air as a co-oxidant

Applications



Reaction substrate examples :



Reference T. Korenaga, K. Nitatori, H. Muraoka, S. Ogawa, K. Shimada, *Org. Lett.* **2015**, 17, 5500.
<https://doi.org/10.1021/acs.orglett.5b02887>

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Introduction of the Researcher

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Research Description

The Korenaga research group focuses on the strategy and development of homogeneous catalysis. Their group has developed fluorinated arylphosphine ligands to reduce catalytic loading in transition-metal catalysis. In addition, they have developed organocatalysts for traditionally transition-metal catalyzed reactions. The Korenaga group takes advantage of computational quantum chemistry to develop and refine novel catalysts, and collaborates with their quantum calculations with other laboratories.

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