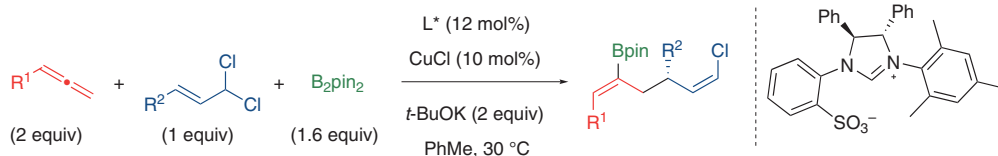


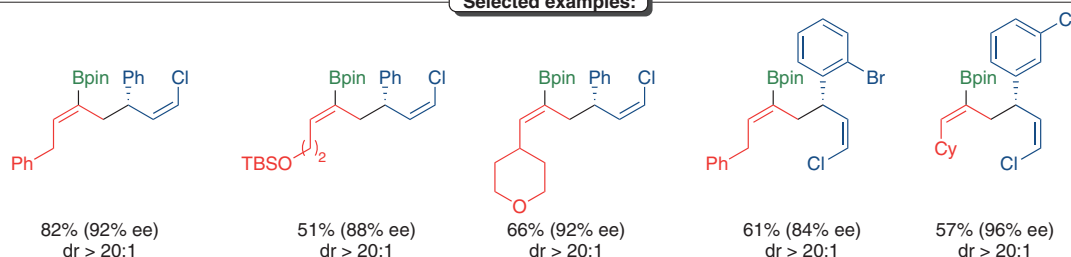
M. PIÑEIRO-SUÁREZ, A. M. ÁLVAREZ-CONSTANTINO, M. FAÑANÁS-MASTRAL*
(UNIVERSIDADE DE SANTIAGO DE COMPOSTELA, SPAIN)
Copper-Catalyzed Enantioselective Borylative Allyl–Allyl Coupling of Allenes and Allylic *gem*-Dichlorides
ACS Catal. 2023, 13, 5578–5583, DOI: 10.1021/acscatal.3c00536.

Enantioselective Copper-Catalyzed Three-Component Synthesis of *Z,Z*-Multifunctional-1,5-dienes

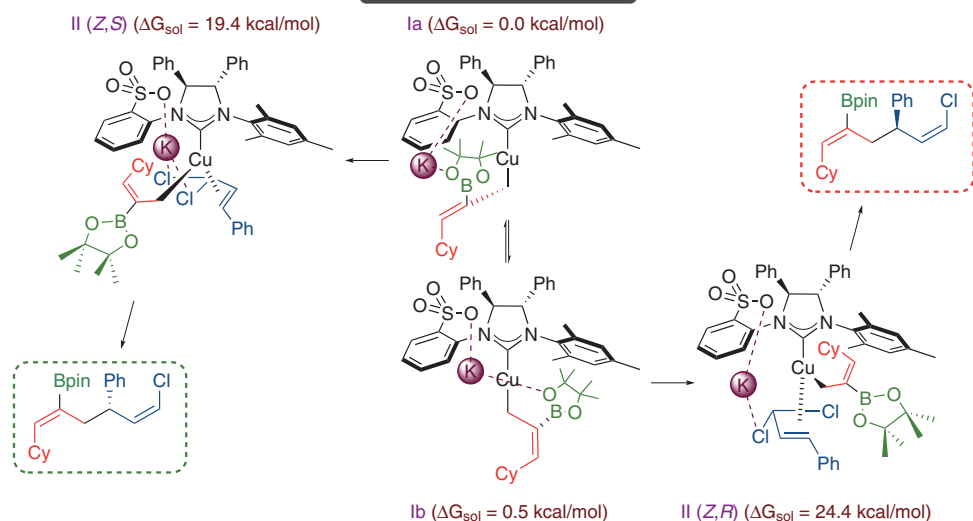


- 18 examples 40–82% yield (up to 97% ee and >20:1 dr)
- up to 1 mmol scale
- high chemo-, regio-, enantio- and diastereoselectivity

Selected examples:



Proposed reaction pathway:



Significance: The group of Fañanás-Mastral reports a highly chemo-, regio-, enantio- and diastereoselective copper-catalyzed synthesis of multifunctional internal 1,5-dienes. This reaction has a large functional group tolerance and the products could be easily transformed into more complex structure for example using coupling reactions.

Comment: The authors explain the high level of enantio- and diastereoselectivity observed in this transformation by non-convalent substrate–ligand interactions. This result is supported by DFT calculations.

SYNFACTS Contributors: Mark Lautens, Aurélien Dupeux
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