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Trans-Selective Radical Silylzincation of Ynamides
Angew. Chem. Int. Ed. **2014**, *53*, 11333–11337.

Trans-Selective Silylzincation of Terminal Ynamides

Category

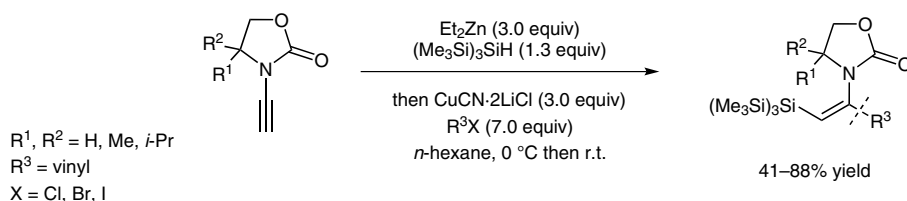
Metal-Mediated
Synthesis

Key words

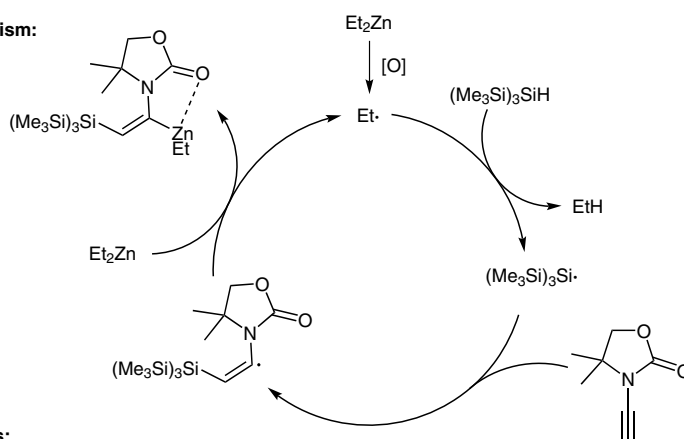
zinc

copper

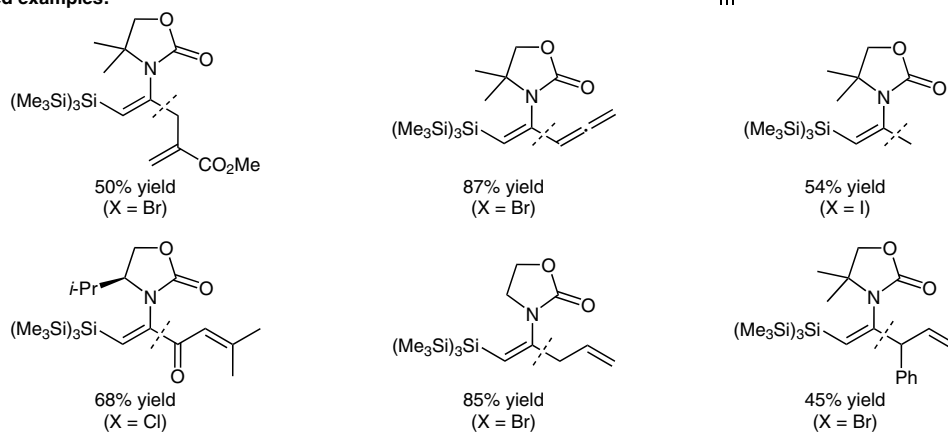
silylation



Proposed mechanism:



Selected examples:



Significance: The authors report a regio- and stereoselective silylzincation reaction of terminal ynamides using $(\text{Me}_3\text{Si})_3\text{SiH}$ and diethyl zinc. The resulting vinylzinc intermediates are trapped by a copper(I)-mediated substitution reaction to obtain *Z*- β -silylenamides in high yields.

Comment: The radical-chain process involves an addition of the $(\text{Me}_3\text{Si})_3\text{Si}$ radical to the ynamide to provide a *Z*-configured α -amino vinylic radical which reacts with the dialkylzinc reagent by homolytic substitution to afford a α -zincated β -silylenamide.

SYNFACTS Contributors: Paul Knochel, Diana Haas
 Synfacts 2015, 11(1), 0079 Published online: 15.12.2014
 DOI: 10.1055/s-0034-1379647; Reg-No.: P15214SF