

CAAC–IPr*: easily accessible, highly sterically-hindered cyclic (alkyl)(amino)carbenes

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Streszczenie

IPr* (IPr* = 1,3-bis(2,6-bis(diphenylmethyl)-4-methylphenyl)imidazol-2-ylidene) has emerged as a powerful highly hindered and sterically-flexible ligand platform for transition-metal catalysis. CAACs (CAAC = cyclic (alkyl)(amino)carbenes) have gained major attention as strongly electron-rich carbon analogues of NHCs (NHC = N-heterocyclic carbene) with broad applications in both industry and academia. Herein, we report a merger of CAAC ligands with highly-hindered IPr*. The efficient synthesis, electronic characterization and application in model Cu-catalyzed hydroboration of alkynes is described. The ligands are strongly electron-rich, bulky and flexible around the N-Ar wingtip. The availability of various IPr* and CAAC templates offers a significant potential to expand the existing arsenal of NHC ligands to electron-rich bulky architectures with critical applications in metal stabilization and catalysis.

Adres publiczny

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