Strem Chemicals, Inc

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Catalog # 07-0302 1,3-Bis(2,4,6-trimethylphenyl)-4,5-dihydroimidazolium tetrafluoroborate, min. 95% SIMes-HBF4

Technical Notes:

- 1. Ligand for ruthenium-catalyzed selective reduction of nitriles to primary amines.
- 2. Ligand for nickelcatalyzed [2+2+2] cycloaddition of arynes and an unactivated alkene.
- 3. Ligand for copper-catalyzed [3+2] cycloaddition of azides and alkynes under mild conditions.
- 4. Ligand for copper-catalyzed direct aryl quaternization of *N*-substituted imidazoles to form imidazolium salts.
- 5. Ligand for copper-catalyzed silylation of allenes.

$$0.5 \text{ mol}\% \text{ [Ru(COD)Methylallyl_2]}$$

$$0.5\text{-}1.0 \text{ mol}\% \text{ SiMesBF}_4$$

$$-\text{CN} - \frac{10 \text{ mol}\% \text{ KO}^t\text{Bu}}{\text{H}_2 \text{ (35 bar)}}$$

$$-\text{CH}_2\text{NH}_2$$

$$-\text{CH}_2\text{NH}_2$$

$$-\text{CH}_2\text{NH}_2$$

$$R_1-N_3 + = R_2 \xrightarrow{0.5 \text{ mol}\% - 5 \text{ ppm Cat}} R_1 - N_3 + R_2$$

Tech. Note (3)

Ref. (3)

$$R^{-N} \stackrel{N}{\searrow} N + Ar \stackrel{I^{+}}{\nearrow} Ar = \frac{[Cu/L] (5 \text{ mol\%})}{DMF, 100^{\circ}C, 4h} R^{-N} \stackrel{X^{-}}{\nearrow} N \stackrel{X^{-}}{\nearrow} Ar = \frac{Ch. \text{ Note (4)}}{Ref. (4)}$$

R = alkyl, aryl, heteroaryl

References:

- 1. Tetrahedron Lett., 2009, 50, 3654.
- 2. Chem. Commun., 2009, 4284.
- 3. Organometallics, 2012, 31, 7969.
- 4. J. Org. Chem., 2013, 78, 5723.
- 5. Chem. Eur. J., 2014, 20, 13143.