Strem Chemicals, Inc.

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Catalog # 07-0595 1,3-Bis(2,6-di-i-propylphenyl)imidazol-2-ylidene, min. 98%

Technical Notes:

- 1. Synthesis of dibenzofurans via palladium-catalyzed phenol-directed C-H activation/C-O cyclization.
- 2. Nickel-catalyzed intermolecular [2+2] cycloaddition of conjugated enynes with alkenes.
- 3. CO₂ as a C1-building block for the catalytic methylation of amines.
- 4. Copper-catalyzed hydroboration of carbon dioxide.
- 5. Linear-selective hydroarylation of unactivated terminal and internal olefins with trifluoromethyl-substituted arenes
- 6. Nickel-catalyzed dehydroarylation cross-coupling: Direct transformation of aldehydes into esters and amides.
- 7. Ligand-controlled regiodivergent Cu-catalyzed aminoboration of unactivated terminal alkenes.
- 8. Highly regioselective indoline synthesis under nickel/photoredox dual catalysis.
- 9. Catalytic activation of carbon-carbon bonds in cyclopentanones.
- 10. Au(III)-aryl intermediates in oxidant-free C-N and C-O cross-coupling catalysis.
- 11. Iron-catalyzed cross-coupling reactions of arylmagnesium reagents with aryl chlorides and tosylates.
- 12. Tertiary and quaternary carbon formation via Gallium-Catalyzed nucleophilic addition of organoboronates to cyclopropanes.
- 13. A tethering directing group strategy for ruthenium-catalyzed intramolecular alkene hydroarylation.

Me N-H + CO₂ + n R₃SiH
$$\xrightarrow{\text{cat. ZnX}_2 + \text{ligand}}$$
 $\xrightarrow{\text{N-CH}_3}$ + siloxanes $\xrightarrow{\text{Ref. (3)}}$ Ref. (3)

$$C_6H_{15} + \underbrace{\begin{array}{c} \text{pinB - B} \\ \text{Bn}_2\text{N - OBz} \end{array}}_{\text{THF, rt, 4 h}} \underbrace{\begin{array}{c} \text{10 mol\% catalyst} \\ \text{MO-t-Bu} \\ \text{THF, rt, 4 h} \end{array}}_{\text{NBn}_2} + \underbrace{\begin{array}{c} \text{NBn}_2 \\ \text{C}_6H_{13} \end{array}}_{\text{NBn}_2} + \underbrace{\begin{array}{c} \text{B} \\ \text{NBn}_2 \\ \text{C}_6H_{13} \end{array}}_{\text{NBn}_2} + \underbrace{\begin{array}{c} \text{Tech. Note (7)} \\ \text{Ref. (7)} \end{array}}_{\text{NBn}_2}$$

$$R + n-Hex = \begin{array}{c} [Ni(COD)_2] \text{ (15 mol\%)} \\ \text{Ligand (16 mol\%)} \\ \text{Ru(bpy)}_2(PF_6)_2 \text{)1 mol\%)} \\ \text{Et}_3N \text{ (2 equiv)} \\ \text{acetone (0.22 M)} \\ \text{blue LEDs, rt, 26 h} \end{array}$$

$$\begin{array}{c} \text{5 mol\% Rh}(C_2H_4)_2Cl]_2 \\ \text{15 mol\% ligand} \\ \text{20 mol\% MeSO}_3H \\ \hline \\ \text{100 mol\% 2-amino-6-picoline} \\ \text{20 mg 4A MS} \\ \text{1.4-dioxane (1.0M), 150°C, 48h} \\ \end{array} \\ \text{X = CH}_2 \text{ or O} \\ \end{array}$$

$$X = CI \text{ or } OTs$$

$$R' \xrightarrow{H} O \\ R_2 \xrightarrow{R_1} R_2 \xrightarrow{R_2} R_2 \xrightarrow{R_1 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2} R_1 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2} R_1 \xrightarrow{R_1 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2} R_2 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2 \times R_2} R_3 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2} R_4 \xrightarrow{R_1 \times R_2 \times R_2 \times R_2 \times R_2} R_4 \xrightarrow{R_1 \times R_2} R_4 \xrightarrow$$

References:

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- 10. Chem. Sci., 2017, 8, 946.
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- 12. Org. Lett., 2018, 20, 112.
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