Strem Chemicals, Inc

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Catalog # 28-0500 Dichloro[1,1'-bis(diphenylphosphino)ferrocene]nickel(II), 98%

Technical Notes:

- 1. Catalyst for Grignard metathesis chain-growth polymerization of Poly(bithienylmethylene)s.
- 2. Catalyst for neopentylglycolborylation of ortho-substituted aryl halides.
- 3. Catalyst for Suzuki-Miyaura coupling reactions of heteroaryl ethers with arylboronic acids.
- 4. Catalyst for carboxylation of naphthyl pivalates with CO2.
- 5. Catalyst decarboxylative C-P cross-coupling of alkenyl acids with P(O)H compounds.
- 6. Catalyst for direct amination of phenols via C–O Bond Activation using 2,4,6-Trichloro-1,3,5-triazine as reagent.
- 7. Catalytic precursor for Suzuki–Miyaura cross-coupling reactions in water under very mild reaction conditions: (a) aryl–heteroaryl cross-couplings; (b) Hetero–heteroaryl cross-couplings.

OMe Tech. Note. (3), Ref. (3)
$$R = \frac{N N}{N} = \frac{ArB(OH)_2}{NiCl_2(dppf); K_3PO_4} R = \frac{ArB(OH)_2}{NiCl_2(dppf); K_3PO_4} R$$

$$R \xrightarrow{\text{OPiv}} \frac{\text{NiCl}_2(\text{dppf}) / (\text{dppf})}{\text{Mn, DMA, CO}_2 (1 \text{ atm})} R \xrightarrow{\text{CO}_2 H}$$

$$Ref. (4)$$

a)
$$Ar/HetAr - X + HetAr'/Ar' - Y$$

$$\frac{NiCl_2(dppf) (1.5 \text{ mol}\%);}{K_3PO_4, TPGS-750-M/H_2O (0.5 \text{ M})} Ar/Het/Ar - Ar'/HetAr'$$

$$\frac{NiCl_2(dppf) (1.5 \text{ mol}\%);}{MeMgBr (1.5 \text{ mol}\%);} Ar/Het - X + Ar'/Het - Y$$

$$\frac{NiCl_2(dppf) (1.5 \text{ mol}\%);}{K_3PO_4, TPGS-750-M/H_2O (0.5 \text{ M})} Ar/Het - HetAr'$$

References:

- 1. Macromolecules, 2010, 43, 4438.
- 2. J. Org. Chem., 2010, 75, 5438.
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- 5. J. Org. Chem., 2014, 79, 8118.
- 6. Adv. Synth. Catal., 2014, 356, 3067.
- 7. Angew. Chem. Int. Ed., 2015, 54, 11994.