Strem Chemicals, Inc.

www.strem.com

Catalog # 07-1923 4,7-Dimethoxy-1,10-phenanthroline, 98%

Technical Notes:

- 1. Palladium-catalyzed synthesis of benzofurans and coumarins from phenols and olefins.
- 2. Copper-catalyzed intermolecular amidation and imidation of unactivted alkanes.
- 3. Synthesis of amides via copper-catalyzed amidation of aryl halides using isocyanides.
- 4. Copper-catalyzed benzylic C(sp3)-H alkoxylation of heterocyclic compounds.
- 5. Iridium-catalyzed silylation of aryl C-H bonds.
- 6. Palladium-catalyzed intramolecular cyclization of nitroalkenes: synthesis of thienopyrroles.
- 7. A Copper-catalyzed N-alkynylation route to 2-substitued N-alkynyl pyrroles and their cyclization into pyrrolo[2,1-c]oxazin-1-ones

R-NC + Ar-X
$$\xrightarrow{\text{Cu}_2\text{O}, \text{Cs}_2\text{CO}_3, \text{ ligand}}$$
 Ar $\xrightarrow{\text{N}}$ R $\xrightarrow{\text{Ref. (3)}}$ Ref. (3)

$$R + \frac{1}{n} + \frac{[Ir(cod)OMe]_2}{\text{"phenanthroline"}} + R + \frac{[Si]}{x} + R + \frac{R'}{x} + \frac{R'}{Ref. (4)}$$

$$X = CH,$$

$$N,O,S$$

$$n = 0.1$$

$$R' = OH, Br, I, aryl$$

$$R' = OH, Br, I, aryl$$

$$\begin{array}{c} R_1 & \longrightarrow \\ R_2 & \longrightarrow \\ \text{or} & & \\ R_1 & \longrightarrow \\ \text{or} & & \\ R_2 & & \\ R_3 & & \\ \text{CO (5 bar), CH}_3\text{CN, 150°C, 3h} & \\ R_1 & \longrightarrow \\ \text{R_2} & & \\ \text{R_2} & & \\ \text{Ref. (5)} & \\ R_2 & & \\ \text{Ref. (5)} & \\ \end{array}$$

References:

- Angew. Chem. Int. Ed., 2013, 52, 12669.
 J. Am. Chem. Soc., 2014, 136, 2555.
 Organic & Biomolecular Chemistry, 2014, 12, 2528.
 Tetrahedron Letts., 2014, 55, 4981.
 J. Am. Chem. Soc., 2015, 137, 592.
 Synthesis, 2017, 49, 2544.
 European Journal of Organic Chemistry, 2017, 2017(14), 1902.