Strem Chemicals, Inc

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Catalog # 77-9500 (Tricyclohexylphosphine)(1,5-cyclooctadiene)(pyridine)iridium (I) hexafluorophosphate, 99% CRABTREE'S CATALYST

Technical Notes:

- 1. Iridium catalyst used for the highly enantioselective hydrogenation of α,β -unsaturated esters.
- Iridium catalyst used for the stereoselective catalytic hydrogenation and conjugate reduction of 4methylitaconate derivatives bearing a chiral auxiliary.
- 3. Iridium catalyst used in the synthesis of thiophene-based TAK-779 analogues via C-H arylation.
- 4. Iridium catalyst used in the practical synthetic approach to chiral (α-chloroalkyl)boronic esters via an iridium-catalyzed, chemoselective hydrogenation.
- 5. Iridium catalyst used in the regioselective C-H activation and hydrogen-isotope exchange of non-aromatic unsaturated functionality.

CI
$$\xrightarrow{B^{-0}}$$
 $\xrightarrow{\text{Ir complex}}$ $\xrightarrow{\text{R}^{1}}$ $\xrightarrow{\text{R}^{$

ee up to 94% 0-19% (GC yield) 81-96% (GC yield)

$$R^{1} \xrightarrow{DG} \frac{\text{Ir complex (0.1 mol\%)}}{\text{CH}_{2}\text{Cl}_{2}, D_{2} \text{ (1 atm)}} \xrightarrow{R^{1}} DG$$

$$25^{\circ}\text{C, 1 h}$$

$$Tech. \text{ Note (5)}$$

$$R^{2}$$

$$Ref. \text{ (5)}$$

References:

- 1. Chemistry- A Eur. J., 2012, 18, 10609.
- 2. Tetrahedron, 2013, 69, 3486.
- 3. J. Org. Chem., 2013, 78, 5579.
- 4. Synthesis, **2013**, *45*, 2824.
- 5. Chemistry- A Eur. J., 2014, 20, 14604.