Strem Chemicals, Inc

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Catalog # 77-7015 Tris(2-phenylpyridinato-C2,N)iridium(III), 95%

Technical Notes

- Photocatalyst for α-amino C-H arylation of cyano(hetero)arenes by tertiary amines
- 2. Photocatalyst for trifluoromethylation of alkenes and alkynes
- 3. Photocatalyst for reduction of alkyl, alkenyl, aryl iodides (a) and intramolecular reductive cyclizations (d)
- 4. Photocatalyst for organocatalyst assisted direct arylation of allylic sp³ C–H bonds
- 5. Photocatalyst for the generation multifluorinated biaryls via functionalization of the C-F bond of a perfluoroarene and C-H bond of the other arene in the presence of amines
- Photocatalyst for visible-light photoredox arylation of thiols with various aryl halides

R-I, Ar-I,
$$R^{1}$$
 R^{2}
 R^{2}

$$\begin{array}{c|c} H & & fac\text{-}[Ir(ppy)_3] \\ \hline & Organocatalyst \\ \end{array}$$

Tech. Note (4) Ref. (5)

R#F_n Arene-H
$$\frac{\text{fac-[Ir(ppy)_3] (0.25 mol\%), DIPEA 1.2-6.0 equiv}}{\text{K}_2\text{CO}_3, \text{MeCN, 0°C, blue LED, Ar}^a}$$
 +HF*Base

Tech. Note (5) Ref. (6)

$$R^{1} \underbrace{ \left\{ \begin{array}{c} X \\ Y \end{array} \right\}}_{Y} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,} Cs_{2}CO_{3,} DMF, Ar}_{RT, 23 \ W \ CFL} + R^{2} \underbrace{ \left[fac\text{-lr(ppy)} \right]_{3,}$$

Tech. Note (6) Ref. (7)

References:

- 1. Science **2011**, 334, 1114
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- 7. Angew. Chem. Int. Ed. 2017, 56, 874