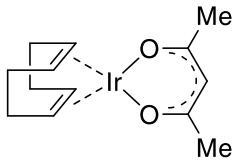
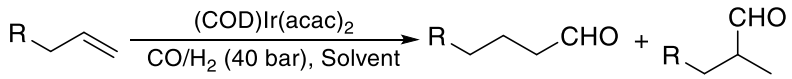
Catalog # 77-0900 1,5-Cyclooctadiene(acetylacetonato)iridium(I), 99% (99.9%-Ir)



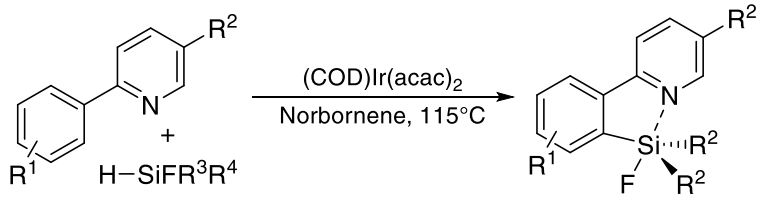
Catalysis Applications

Technical Notes:

1. Catalyst used for hydroformylation of olefins
2. Catalyst used for ortho-selective C–H silylation of aromatic compounds
3. Catalyst used for hydrohydroxymethylation of allene via C–H functionalization of methanol to generate enantioselective formation of CF_3-bearing all-carbon quaternary stereocenters
4. Catalytic used for asymmetric synthesis of cyclohexanes by hydrogen borrowing annulations
5. Catalyst for phosphonate-directed ortho C–H borylation of aromatic phosphonates



Tech Note (1)
Ref. (1)



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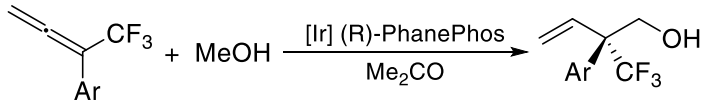
Ref. (2)



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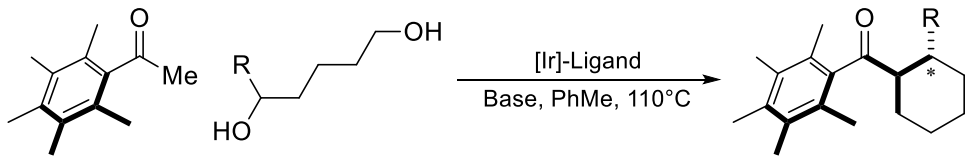
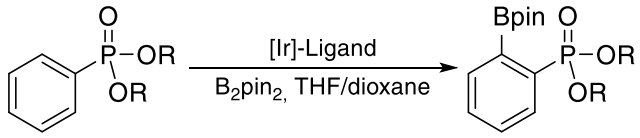
Ref. (3)



Tech Note (4)
Ref. (4)



Tech Note (5)
Ref. (5)

References:

1. *Angew. Chem. Int. Ed.* **2011**, *50*, 280.
2. *Org. Lett.* **2015**, *17*, 1758.
3. *J. Am. Chem. Soc.* **2017**, *139*, 8114.
4. *Angew. Chem. Int. Ed.* **2019**, *58*, 12558.
5. *J. Am. Chem. Soc.* **2020**, *142*, 11988.

CVD/ALD Applications

Thermal Behavior:

- Melting point: 155°C [1, 2]
- TGA diagram and data is available in [1, 2]
- Sublimation: 120°C/0.05 Torr [3]

Technical Notes:

1. CVD precursor for iridium containing thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Ir	CVD	-	10 Torr	H_2	600°C	3
$Pt_xIr_{(1-x)}$	CVD	133-140°C	10 Torr	$Pt(acac)_2$, O_2	310°C	4
IrO_2	CVD	*iso*-octane solution	-	-	300-400°C	5

References:

1. *J. Therm. Anal. Calorim.* **2009**, *96*, 261.
2. *J. Coord. Chem.* **2016**, *69*, 2281.
3. *Russ. J. Inorg. Chem.* **2020**, *65*, 1781.
4. *J. Struct. Chem.* **2021**, *62*, 1447.
5. *ACS Appl. Energy Mater.* **2021**, *4*, 11162.