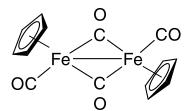
# Strem Chemicals, Inc.

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Catalog # 26-0900 Cyclopentadienyliron dicarbonyl dimer, 99%



#### **Catalysis Applications**

**Technical Notes:** 

- 1. Catalyst used for hydrosilylation of esters catalyzed
- 2. Catalyst for dehydrocoupling/dehydrogenation of primary and secondary amine-boranes
- 3. Catalyst for hydrophosphination of alkenes
- 4. Catalyst for selective N-methylation and N-formylation of amines with CO2
- 5. Component of cooperative copper/iron catalyst for regioselective 1,4-hydroboration of pyridine derivatives and quinoline with pinacolborane

$$R_{1} \xrightarrow{P} OR^{2} \xrightarrow{[Fe]-L, Visible light}{Solvent-free conditions}} R^{1} \xrightarrow{OH} \qquad Tech Note (1) Ref. (1)$$

$$RNH_{2} \cdot BH_{3} \xrightarrow{[Fe] Catalyst}{-H_{2}, hv, THF, rt} \xrightarrow{HB} NR \\ R_{N} \xrightarrow{B} NR \\ H_{2} BH_{3} \xrightarrow{P} NR \\ H_{2} BH_{3} \xrightarrow{P} NR \\ H_{2} BH_{3} \xrightarrow{P} NR \\ H_{2} BH_{2} + Ph_{2} PH \xrightarrow{Fe} OR_{2} \xrightarrow{P} Ph_{2} + R^{P} Ph_{2} \\ H_{2} B-NR_{2} \xrightarrow{P} Ph_{2} + R^{P} Ph_{2} \xrightarrow{P} Ph_{2} \xrightarrow{P} Ph_{2} \xrightarrow{P} Ph_{2} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_{2} \xrightarrow{P} Ph_{3} \xrightarrow{P} Ph_$$

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References:

- 1. Adv. Synth. Catal. 2012, 354, 1879.
- 2. J. Am. Chem. Soc. 2014, 136, 3048.
- 3. Organometallics 2017, 36, 3891.
- 4. Adv. Synth. Catal. 2019, 361, 5098.
- 5. ACS Catal. 2020, 10, 3670.

#### **CVD/ALD** Applications

Thermal Behavior:

• Decomposition at 194°C

Technical Notes:

1. CVD precursor for iron containing film deposition

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
(-Fe-O- C6H4-O-)n	ALD/MLD	135°C	1.5-3 Torr	Hydroquinone H <sub>2</sub> O	150-290°C	1
BiFeO <sub>3</sub>	CVD	THF solution	-	BiCl₃	300°C	2

References:

- 1. Dalton Trans. 2015, 44, 19194.
- 2. J. Mater. Chem. A, 2014, 2, 2922.