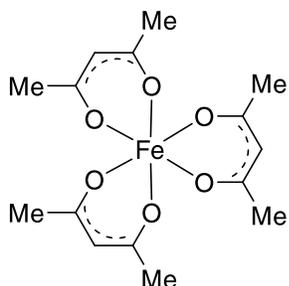


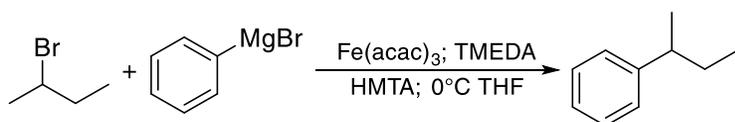
Catalog # 26-2300 Iron(III) acetylacetonate, 99%



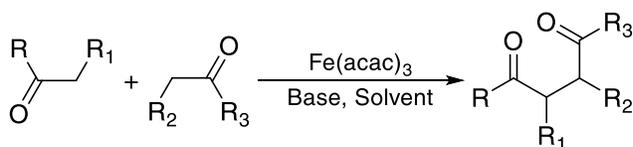
Catalysis Applications

Technical Notes:

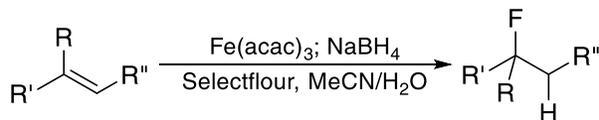
1. Used in Fe-catalyzed alkylations of aromatic Grignard reagents
2. Catalyst for intermolecular enolate heterocoupling
3. Used in Fe(III)/NaBH₄-mediated free radical hydrofluorination of unactivated alkenes
4. Catalyst for borylation of alkyl electrophiles
5. Catalyst for enantioselective cross-coupling reactions of α -chloroesters with aryl Grignard reagents
6. Catalyst for C–C bond construction from olefins via radicals
7. Used in modular synthesis of alkylaryloxo compounds via Fe(III)-catalyzed olefin hydroamination
8. Used in Fe-catalyzed hydrogen-atom-transfer-initiated cyclizations of unsaturated acylsilanes
9. Catalyzes *N*-amidomethylation of secondary and primary anilines with TosMIC



Tech Note (1)
Ref. (1)



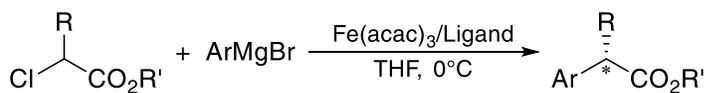
Tech Note (2)
Ref. (2)



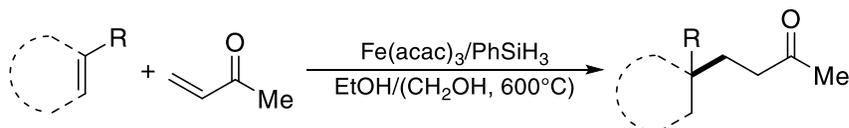
Tech Note (3)
Ref. (3)



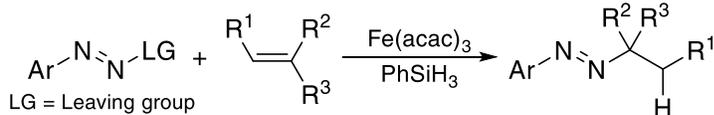
Tech Note (4)
Ref. (4)



Tech Note (5)
Ref. (5)

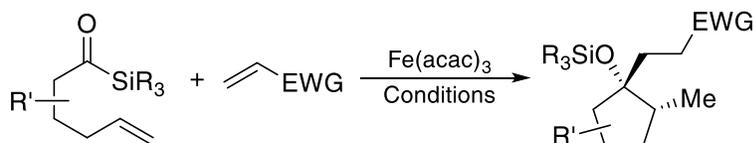


Tech Note (6)
Ref. (6)



LG = Leaving group

Tech Note (7)
Ref. (7)



Tech Note (8)
Ref. (8)

References:

1. [Angew. Chem. Int. Ed. 2007, 46, 4364](#)
2. [J. Am. Chem. Soc. 2008, 130, 11546](#)
3. [J. Am. Chem. Soc. 2012, 134, 13588](#)
4. [J. Am. Chem. Soc. 2014, 136, 9521](#)
5. [J. Am. Chem. Soc. 2015, 137, 7128](#)
6. [J. Am. Chem. Soc. 2017, 139, 2484](#)
7. [Org. Lett. 2019, 21, 2261](#)
8. [ACS Catal. 2020, 10, 510](#)

CVD/ALD Applications

Thermal Behavior:

- Melting point: 180-181°C (decomposes) [1]
- Boiling point: 110°C/2 Torr
- TGA data and diagram are available in [2-4]
- Vapor pressure information is available in [4, 7]; ~2 Torr/110°C

Technical Notes:

1. Precursor and dopant for thin iron film deposition

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
FeO _x	ALD	25-60°C	High Vacuum	O ₂	25-125°C	1
	ALD	80°C	0.75-3.75 Torr	O ₃	230°C	5
	CVD	125-130°C	3 Torr	-	550°C	6
FeS _x	CVD	-	8 Torr	^t Bu ₂ S-S ^t Bu ₂ , H ₂	300-340°C	7
	AP-CVD	150°C	AP	^t Bu ₂ S-S ^t Bu ₂	300°C	8
BiFeO ₃	CVD	160°C	-	[Bi(O ^t Bu) ₃]	450-550°C	9
CoFe ₂ O ₄	AA-CVD	MeOH sol.	AP	Co(OAc) ₂	450-550°C	10
Fe:TiO ₂	CVD	-	-	TTIP, O ₂	600°C	11

References:

1. [J. Phys. Chem. B, 2002, 106, 13146](#)
2. [Dalton Trans. 2014, 43, 4892](#)
3. [Materials 2015, 8, 4593](#)
4. [Surf. Coatings Tech. 2007, 201, 9055](#)
5. [Nanoscale Res. Lett. 2010, 5, 1555](#)
6. [J. Phys. Chem. B, 2006, 110, 18108](#)
7. [Chem. Vap. Deposition 2000, 6, 121](#)
8. [Adv. Energy Mater. 2012, 2, 1124](#)
9. [Cryst. Growth Des. 2016, 16, 3818](#)
10. [Electrochim. Acta, 2017, 246, 870](#)
11. [PNAS, 2002, 99, 6482](#)