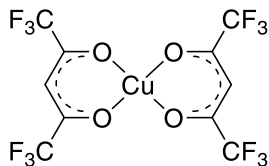


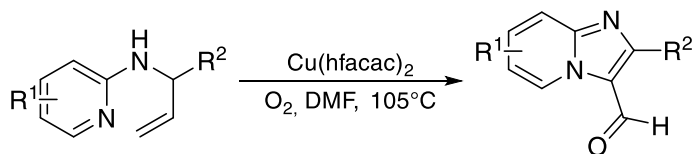
Catalog # 29-2928 Copper(II) hexafluoroacetylacetonate, anhydrous, elec. gr. (99.99+%-Cu) PURATREM



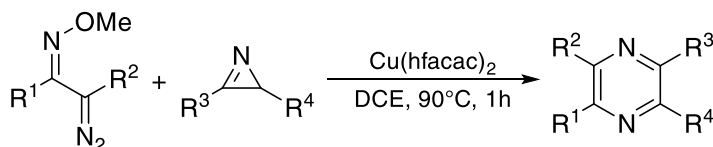
Catalysis Applications

Technical Notes:

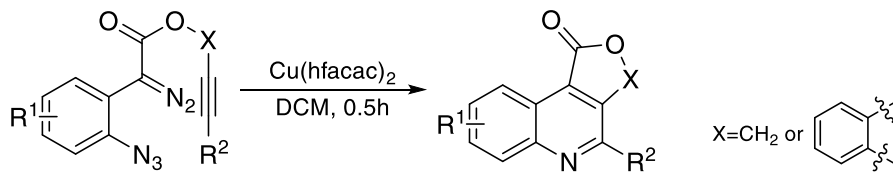
1. Catalyst used for intramolecular dehydrogenative aminoxygation to generate formyl-substituted aromatic N-heterocycles
2. Catalyst for the synthesis of unsymmetrical pyrazines Based on α -diazo oxime ethers
3. Used in Cu-catalyzed novel carbene/alkyne metathesis cascade reaction with alkyne-tethered diazo compounds to generate 4-carboxyl quinolines
4. Catalyst for intramolecular oxidative diamination of alkynes for heterocycle synthesis via *N*-methyl transfer mechanism
5. Catalyst used for N-H insertion reactions between anilines and α -carbonyl sulfoxonium ylides
6. Used in visible-light-driven, acridine-catalyzed direct decarboxylative *N*-alkylation
7. Catalyst for the indole-based rearrangements of onium ylides
8. Catalyst for the chemodivergent reactions of 2-Pyrrolyl- α -diazo- β -ketoesters and enol ethers via [3 + 2] cycloaddition



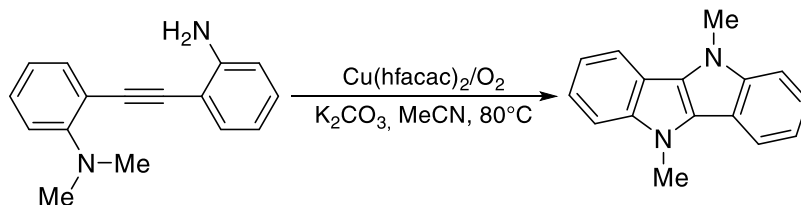
Tech Note (1)
Ref. (1)



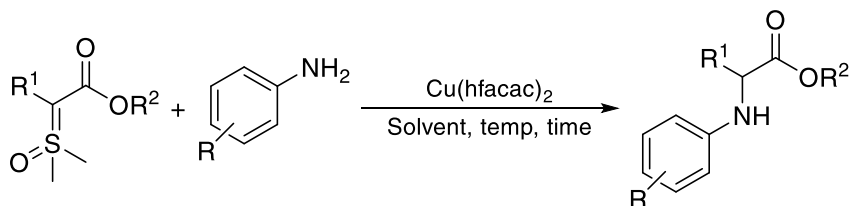
Tech Note (2)
Ref. (2)



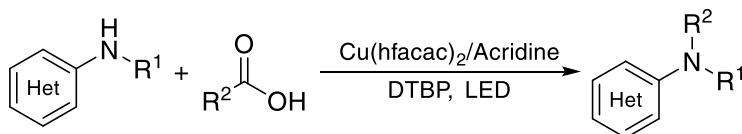
Tech Note (3)
Ref. (3)



Tech Note (4)
Ref. (4)

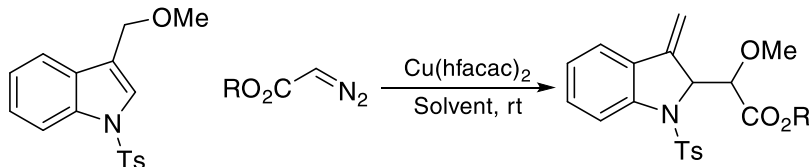


Tech Note (5)
Ref. (5)

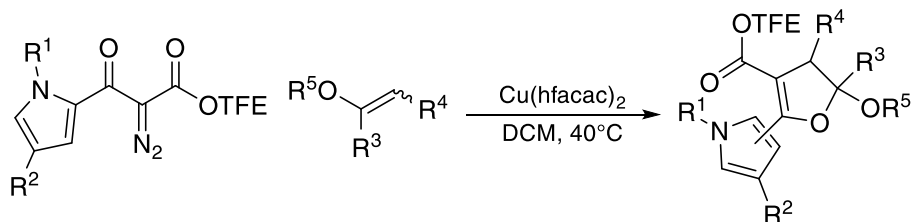


Tech Note (6)
Ref. (6)

primary anilines, *N*-alkylanilines, diarylamines, *N*-heterocycles,
primary, secondary, tertiary alkylcarboxylic acids



Tech Note (7)
Ref. (7)



Tech Note (8)
Ref. (8)

References:

1. [Angew. Chem. Int. Ed. 2011, 50, 5678.](#)
2. [Org. Lett. 2015, 17, 395.](#)
3. [ACS Catal. 2016, 6, 1024.](#)
4. [Org. Lett. 2016, 18, 2487.](#)
5. [Tetrahedron, 2020, 76, 131313.](#)
6. [Angew. Chem. Int. Ed. 2020, 59, 7921.](#)
7. [J. Am. Chem. Soc. 2021, 143, 9016.](#)
8. [J. Org. Chem. 2021, 86, 10088.](#)

CVD/ALD Applications

Thermal Behavior:

- Melting point: 97-99°C
- Boiling point dec. 220°C
- Sublimation: 100°C/0.5 Torr

Technical Notes:

1. Precursor used for the thin copper film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Cu	ALD	75°C	5 mTorr	ROH	300°C	1
	ALD	60°C	1 Torr	H ₂ , Py ^{cat}	25°C	2
	ALD	70°C	3 Torr	Et ₂ Zn	180-200°C	3
	ALD	-	6 Torr	H ₂ O	280°C	4
Cu ₂ O	ALD	70°C	-	H ₂ O	280°C	5
CuN _x	ALD	60°C	3 Torr	NH ₃ , H ₂ O	210-302°C	6
	PEALD	70°C	1 Torr	^P LNH ₃	250°C	7

References:

1. [J. Mater. Res. 2002, 17, 2394.](#)
2. [Chem. Mater. 2010, 22, 1607.](#)
3. [Thin Solid Films 2015, 589, 673.](#)
4. [ACS Appl. Mater. Interfaces 2018, 10, 40958.](#)
5. [ACS Appl. Nano Mater. 2019, 2, 4358.](#)
6. [J. Electrochem. Soc. 2006, 153, C146.](#)
7. [J. Mater. Chem. A, 2015, 3, 18983.](#)