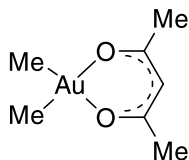


Catalog # 79-1500 Dimethyl(acetylacetonate)gold(III), 98% (99.9%-Au)



### Catalysis Applications

1. Precursor for synthesis of gold nanoparticles used in heterogeneously catalyzed:
  - a. CO oxidation [1, 2]
  - b. Propene epoxidation [3, 4]
  - c. *N*-alkylation of primary amines to secondary amines [5]
  - d. Glucose oxidation [6]
  - e. Aerobic oxidation of alcohols [7]

#### References:

1. [Angew. Chem., Int. Ed., 2012, 51, 5842.](#)
2. [Appl. Catal., B. Environm. 2019, 241, 539.](#)
3. [J. Catal. 2011, 281, 12.](#)
4. [Appl. Catal., B. Environm. 2010, 95, 430.](#)
5. [Gold Bull. 2009, 42, 267.](#)
6. [Angew. Chem., Int. Ed., 2008, 14, 9265.](#)
7. [Chem. A Europ. J. 2008, 14, 8456.](#)

### CVD/ALD Applications

#### Thermal Behavior:

- Melting point: 81-82°C [1],
- Sublimation.: ~25°C/0.01 Torr
- Vapor Pressure: 8.5 mTorr/25°C [1]
- Decomposition: 180°C [1]

#### Technical Notes:

1. ALD/CVD precursor for Au thin films and nanoparticles deposition [1-4]
2. Used for the Au nanoparticles via electron beam induced deposition [5]

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Au	CVD	-	0.5 Torr	-	300°C	2
	CVD	-				O <sub>2</sub> , H <sub>2</sub>
Au nanoparticles	CVD	33°C	-	-	-	4

#### References:

1. [Appl. Phys. Lett., 1985, 47, 538.](#)
2. [J. Electrochem. Soc. 1987, 134, 266.](#)
3. [Appl. Catal. A, 2005, 292, 229.](#)
4. [Solid State Ionics, 1997, 95, 143.](#)
5. [ACS Nano, 2016, 10, 6163.](#)