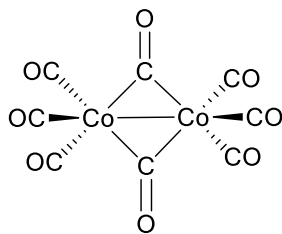


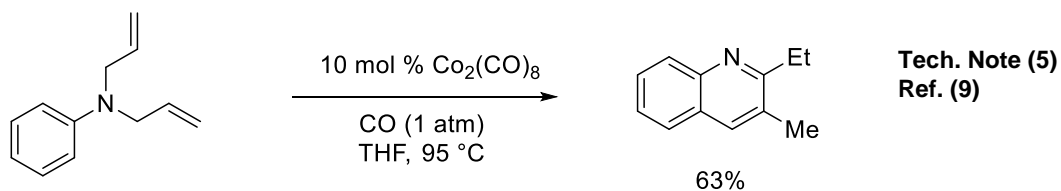
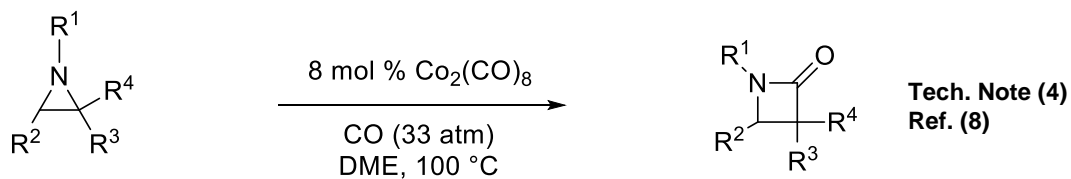
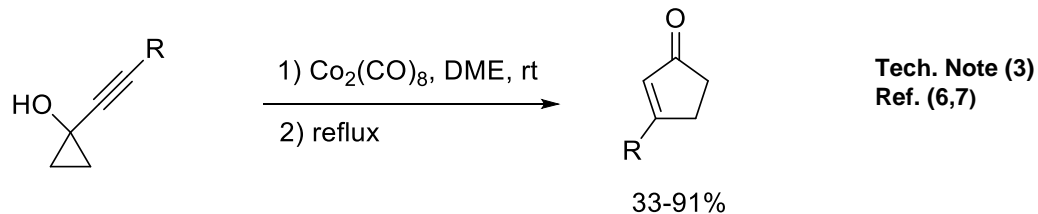
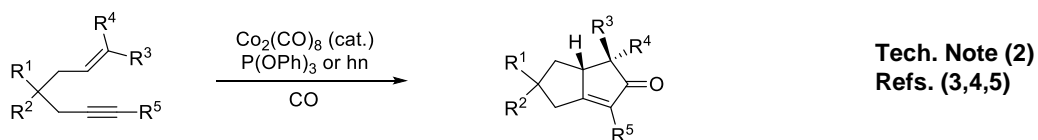
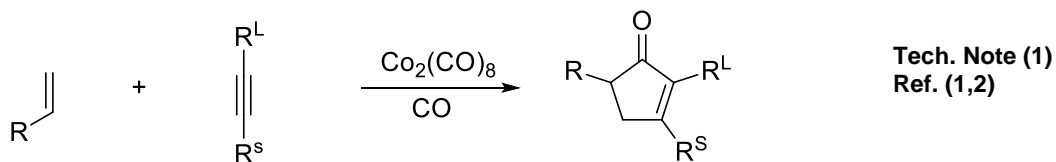
Catalog # 27-0400 Cobalt carbonyl (Dicobalt octacarbonyl) (Stabilized with 1-5% hexane)

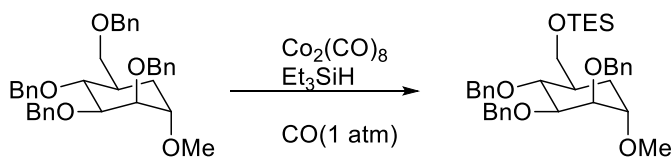


Catalysis Applications

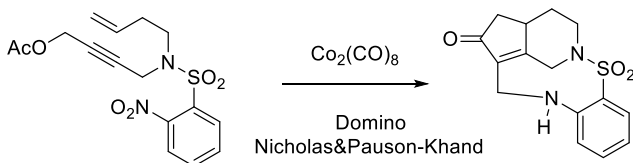
Technical Notes:

1. Reagent for the Pauson-Khand conversion of an olefin, an alkyne and carbon monoxide into a cyclopentenone.
2. Precatalyst in combination with triphenylphosphite for the catalytic Pauson-Khand reaction.
3. Catalyzes the rearrangement of 1-alkynylcyclopropanols to cyclopentenones.
4. Catalyzes the conversion of aziridines to β -lactams.
5. Catalyzes the conversion of diallylanilines and arylimines to quinolones.
6. Reagent for the selective cleavage of benzyl ethers.
7. Domino Nicholas and Pauson-Khand process induced by nitroarene reduction.





Tech. Note (6)
Ref. (10)



Tech. Note (7)
Ref. (11)

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CVD/ALD Applications

Thermal Behavior:

- Vapor pressure of 1 Torr at 35 °C [2]
- Melting point: 51 °C [2]
- Decomposition temperature 60-70 °C [6]

Technical Notes:

1. Volatile carbonyl precursor for various CVD processes for cobalt metal, oxide and silicide films.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
Co	CVD	35 °C	0.03-0.6 Torr		50-200 °C	[3]
Co	FEBID	20 °C	<2 10 ⁻⁶ Torr		25-65 °C	[6]
P:Co	CVD	20 °C	7-12 mTorr	H ₂ , PMe ₃	250-350 °C	[4]
Co _x Fe _y	CVD	23 °C		Fe(CO) ₅ , NH ₃	175-300 °C	[10]
Co _x W _y	CVD	20 °C	5 Torr	W(CO) ₆	90-350 °C	[7]
Co ₃ O ₄	ALD	30 °C	1 Torr	O ₃	50 °C	[9]
Co ₃ O ₄	PECVD	70 °C (in hexane)	0.8 Torr	O ₂ plasma	25 °C	[5]
CoSi ₂	CVD	-10 to 10 °C	0.1-1 Torr	SiH ₄ , Si ₂ H ₆	60-450 °C	[1]
Co(tcne) _x Co _x V _y (tcne) _z	MLD	20 °C	0.1 Torr	Tetracyanoethylene, V(CO) ₆	20 °C	[8]

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