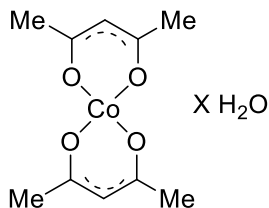


Catalog # 93-2703 Cobalt(II) acetylacetonate hydrate



Thermal Behavior:

- Water removal under reduced pressure or 100 °C [1]
- TGA available in [2]
- Decomposition temperature by DTA: 224 °C [3]
- Melting point (anhydrous) 170 °C [7]; Decomposes before melting [4]
- Vapor pressure (anhydrous) 0.825 Torr at 150 °C [8]

Technical Notes:

1. B-diketonate precursor for ALD and CVD of cobalt metal, carbide and oxide thin films.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
CoO _x	CVD	120 °C	30-70 mTorr	O ₂	150-400 °C	[4]
Co ₃ O ₄	CVD	130 °C		Air	250-400 °C	[5]
Co ₃ O ₄	CVD	250-290 °C	760 Torr	O ₂	450-550 °C	[6]
Co ₃ O ₄	CVD	150-200 °C	1-38 Torr	O ₂	400-550 °C	[9, 10, 19]
CoO _x	CVD	150 °C	5 Torr	O ₂ , N ₂ O	375-550 °C	[11]
Co ₃ O ₄	CVD	150 °C	20 Torr	O ₂	230-440 °C	[12]
Co ₃ O ₄	CVD		10 Torr	O ₂	450-500 °C	[19]
Co ₃ O ₄	LICVD	280 °C (in toluene)	10 Torr	O ₂	650 °C	[13]
Fe _x Cu _y Co _z O	LICVD	(in ethanol)		Fe(acac) ₃ , Cu(acac) ₂ , O ₂		[21]
Co	ALD			H ₂	245-320 °C	[22]

Co	LICVD	180 °C (in n-propanol)	113 Torr	n-propanol	250 °C -350 °C	[14]
Co	LICVD	180 °C (in alcohol)	34 Torr	Methanol, ethanol, n-propanol	325 °C	[15, 16]
Co	LICVD	(in dimethylformamid)	760 Torr	H ₂	290-340 °C	[17]
Co	LICVD	(in ethanol / H ₂ O)	0.5 Torr	H ₂	310 °C	[18]
CoCu _x	CVD	140 °C	760 Torr	Cu(hfac) ₂ , H ₂	250-310 °C	[7]
Co ₂ C	ALD	155 °C	2 Torr	propanol	300-390 °C	[20]
Co ₂ C	LICVD	180 °C (in ethanol)	113 Torr	ethanol	205-230 °C	[14]

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