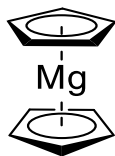


Catalog # 97-1040 Bis(cyclopentadienyl)magnesium (99.99+%-Mg) PURATREM



Thermal Behavior:

- Melting point 176°C
- Boiling point 290°C
- Sublimation 160°C/0.1mm
- Vapor pressure 0.027 Torr/20°C, Diagram is available in [1]

Technical Notes:

1. ALD/CVD precursor and dopant for Mg thin film deposition.

| Target Deposit | Deposition Technique | Delivery Temperature | Pressure | Co-reactants | Deposition Temperature | Ref. |
|-------------------------------------|----------------------|----------------------|----------|--------------------------------------|------------------------|------|
| MgO | ALD | 50°C | - | H ₂ O | 100-400°C | 2 |
| | ALD | 35°C | - | H ₂ O | 80-350°C | 3 |
| | PEALD | 50°C | - | ^{PL} O ₂ | 300°C | 4 |
| MgAl ₂ O ₄ | ALD | 50°C | - | Me ₃ Al, H ₂ O | 100-400°C | 5 |
| Zn _{1-x} Mg _x O | ALD | 57°C | - | Et ₂ Zn, H ₂ O | 105-180°C | 6 |
| Mg:GaN | CVD | - | - | Me ₃ Ga, NH ₃ | 920°C | 7 |

References:

1. [Organometallic Vapor-Phase Epitaxy \(2nd Edition\), Acad. Press, 1999, pp 151-209.](#)
2. [J. Mater. Chem., 2000, 10, 1857.](#)
3. [J. Phys. D: Appl. Phys. 2013, 46, 485304.](#)
4. [J. Alloys Compd., 2014, 588, 716.](#)
5. [Thin Solid Films 2004, 466, 103.](#)
6. [Prog. Photovolt. Res. Appl. 2007, 15, 225.](#)
7. [J. Appl. Phys. 2020, 128, 055301.](#)