

## **CVD/ALD Precursors** for Iron Oxide Films

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## 26-1640 Bis(1,1,1,5,5,5-hexafluoroacetylacetonato)(N,N,N',N'-tetramethylethylenediamine) iron(II), min. 98% [73450-43-8]

100mg 500mg

NMe<sub>2</sub>

 $C_{16}H_{18}F_{12}FeN_2O_4$ ; FW:586.15; black xtl.

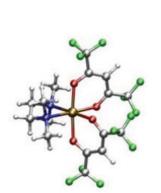
## **Technical Notes:**

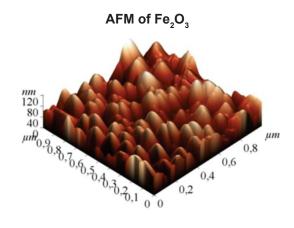
- 1. Volatile iron complex used in the CVD of iron oxide thin films.
- 2. Volatile iron complex used in the vapor deposition of β-Fe<sub>2</sub>O<sub>3</sub> nanosystems.
- Volatile iron complex used in the controlled synthesis β-Fe<sub>2</sub>O<sub>3</sub> nanosystems functionalized with silver and platinum nanoparticles, enabling an intimate metal-oxide contact and offering promising applications in gas-sensing devices.
- Volatile iron complex used in the fabrication of β-Fe<sub>2</sub>O<sub>3</sub> nanomaterials on titanium substrates, which exhibit promising performance as an anode for lithium batteries.
- 5. Volatile iron complex used in the preparation of supported  $\varepsilon$  and  $\beta$  iron oxide by CVD.
- 6. Volatile iron complex used in the preparation of supported fluorine-doped  $\alpha$ -Fe $_2$ O $_3$  via plasma-enhanced CVD.
- 7. Volatile iron complex used in the preparation of Fe<sub>2</sub>O<sub>3</sub>, and subsequent iron oxide ALD functionalization with a Fe-Ti-O overlayer for self-cleaning and antifogging applications.
- 8. Volatile iron complex used as a versatile CVD precursor for the phase-selective synthesis of β- and ε-Fe<sub>2</sub>O<sub>3</sub>.
- 9. Volatile iron complex used as a single source precursor for the one-pot synthesis of fluorine-doped α-Fe<sub>2</sub>O<sub>3</sub> by a plasma-assisted strategy.
- 10. Volatile iron complex used for the plasma-enhanced CVD of fluorine-doped Fe<sub>2</sub>O<sub>3</sub> films for photoelectrochemical applications.
- 11. Combined theoretical/experimental study on the molecular properties and CVD surface behavior of Fe(hfa)<sub>2</sub>TMEDA and its homologous Co, Cu, and Zn compounds.
- 12. Phase-selective synthesis of α, β, and ε-Fe<sub>2</sub>O<sub>3</sub> from Fe(hfa)<sub>2</sub>TMEDA for sunlight-driven hydrogen production via photoreforming of aqueous solutions.
- 13. Theoretical study investigating the molecule-to-material conversion of Fe(hfa)<sub>2</sub>TMEDA, and its homologous Co, Cu and Zn compounds in CVD applications.

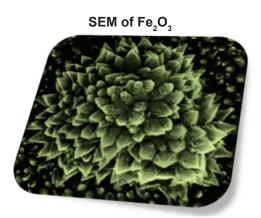
## References:

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