

Thin film synthesis of the organic-based magnet vanadium ethyl tricyanoethylenecarboxylate

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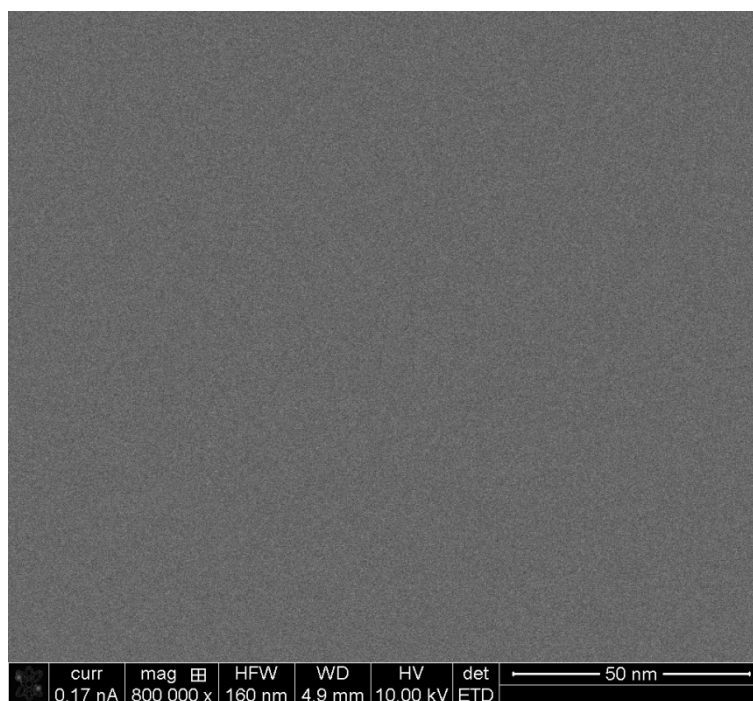


Figure S1 SEM photo of surface morphology of CVD deposited V(ETCEC)_x film

The surface morphology of CVD deposited V(ETCEC)_x film investigated by scanning electron microscopy (SEM, FEI Helios Nanolab 600 Dual Beam Focused Ion Beam/Scanning Electron Microscope) shows absence of polycrystalline granular structure and instead displays homogeneous surface (Figure S1). The thin film was prepared on top of Si substrate with a thickness of ~200 nm.

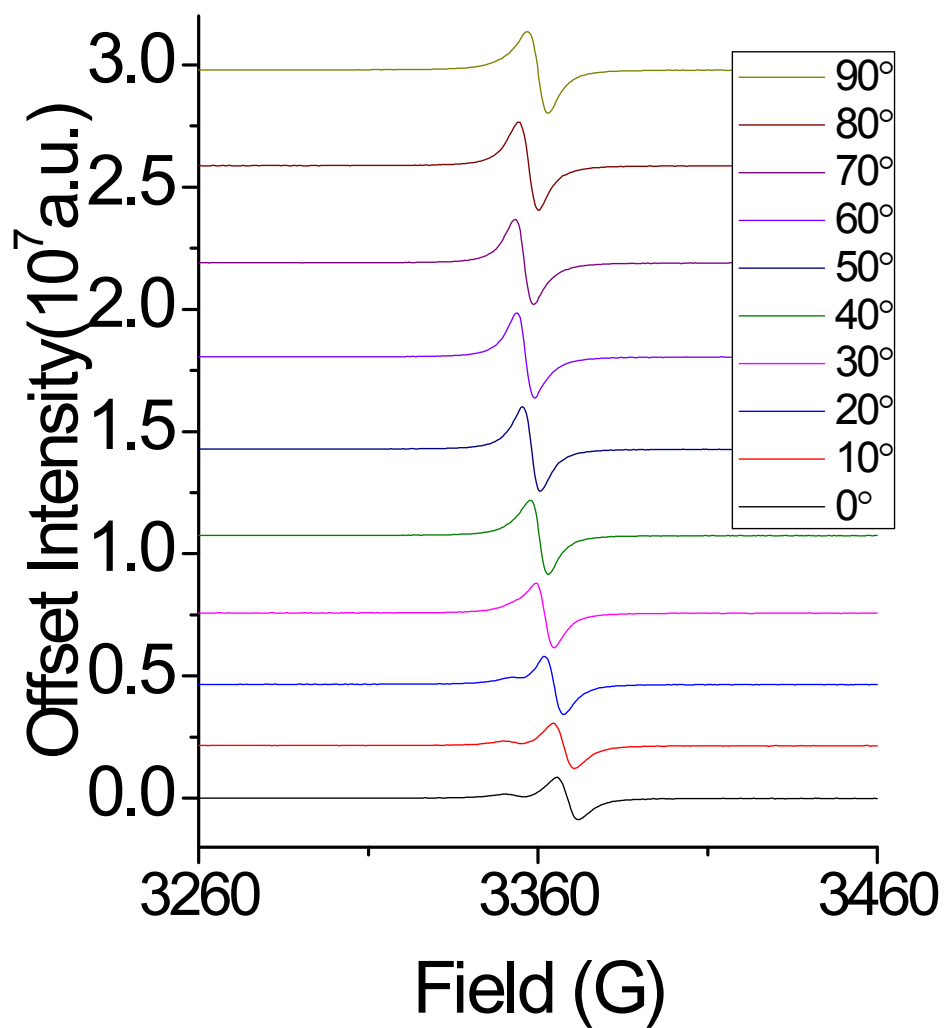


Figure S2 FMR spectrum measured in an EPR spectrometer of a 200 nm V[ETCEC]_x film at 5 K as a function of angle from in-plane(90°) to out-of-plane(0°).

The FMR response at this temperature does not appear to change significantly when the applied field rotates (Figure S2), which is consistent with SQUID data that indicates a low saturation magnetization.