**Supplementary information**

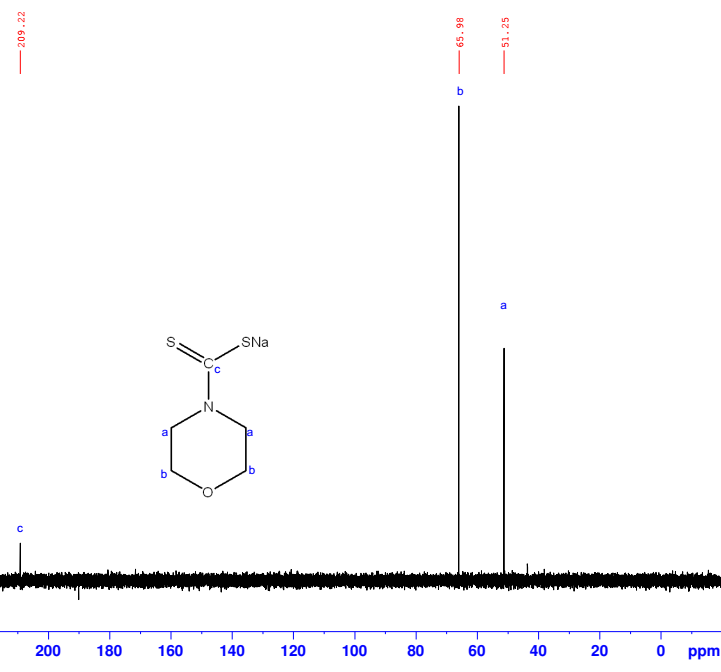
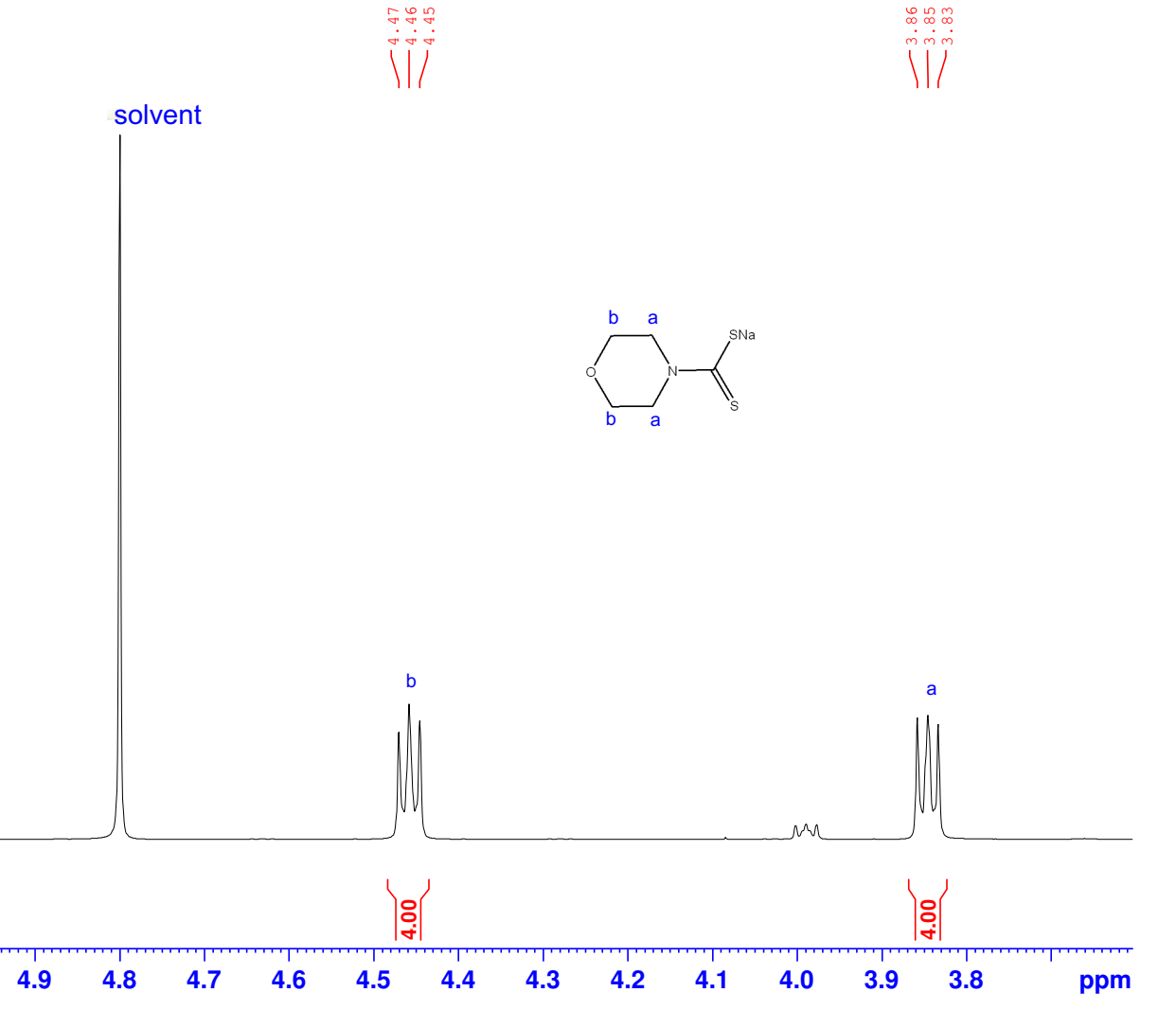
**Synthesis and crystal structure of bis(morpholino dithiocarbamato) Cd(II) complex and its use as precursor for CdS using different capping agents**

**Lebogang L. R. Mphahlele and Peter A. Ajibade\***

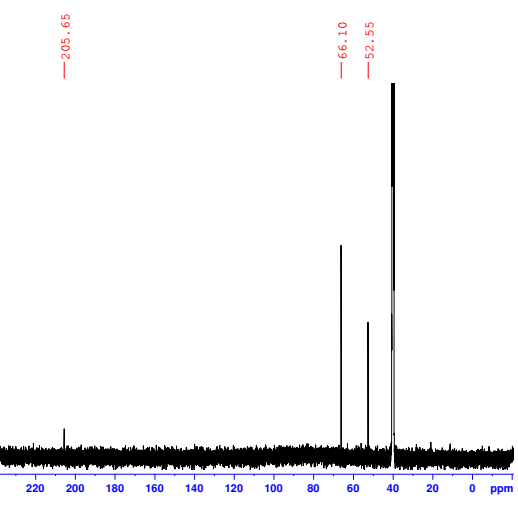
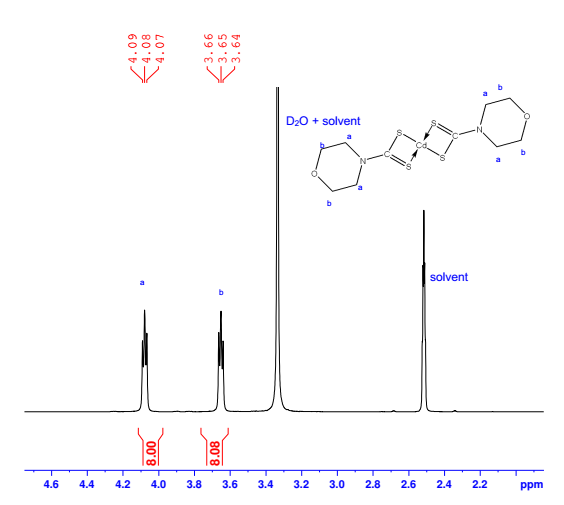
School of Chemistry and Physics, University of KwaZulu-Natal, Private Bag X01, Scottsville, Pietermaritzburg, 3209 South Africa

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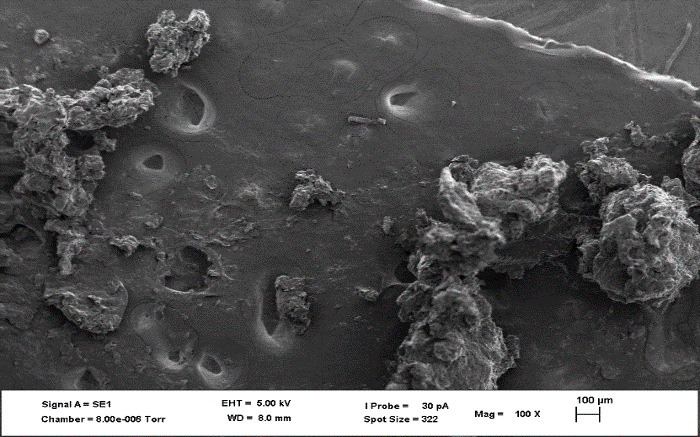
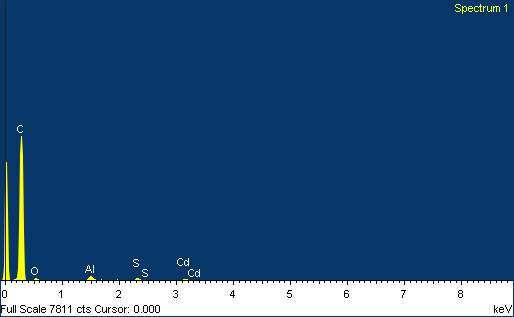
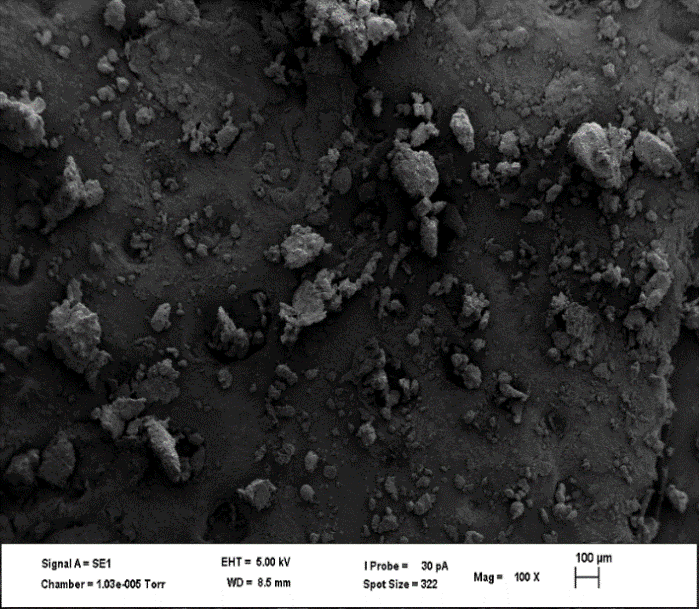
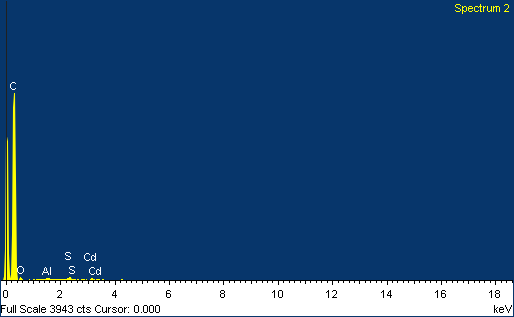
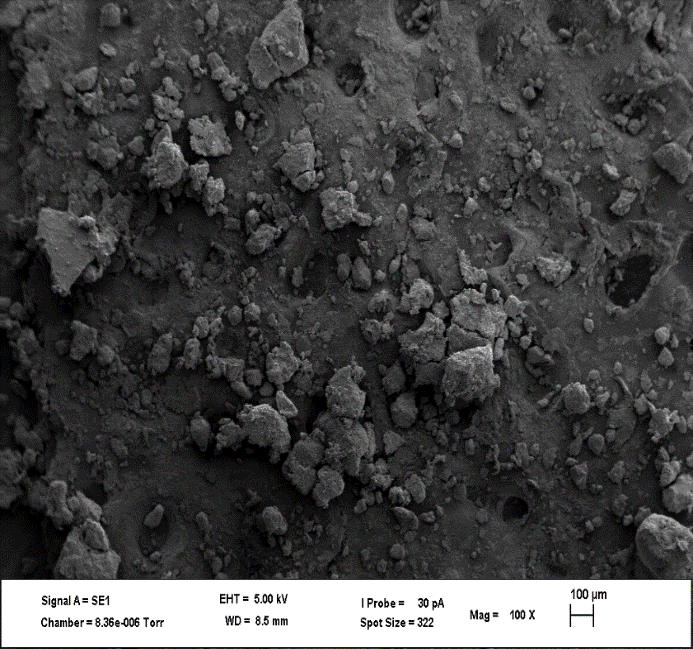
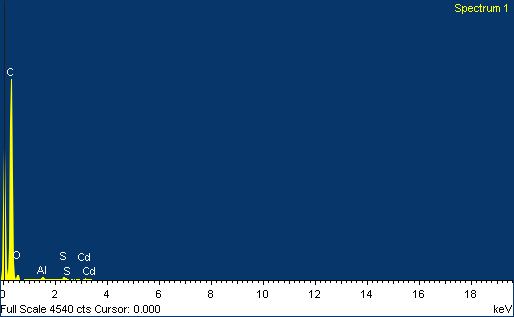
**Figure S1:** IR spectra of morpholine ligand (L) and corresponding Cd(II) complex (C).



**Figure S2:** 1H & 13C NMR spectra of morpholine DTC ligand (L)



**Figure S3:** 1H & 13C NMR spectra of Cd(II)L DTC complex (C)

 **(a)** **(b)** **(C)**

**Figure S4:** SEM micrographs and EDS spectra of as-prepared (OLM, HDA, and ODA) CdS nanoparticles