A Low Temperature Cluster Condensation Approach to CdS Nanocrystals: Oxidative Aggregation of [Cd_{10}S_{4}Br_{4}(SR)_{12}]^{4-} with Sulfur

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Supporting Information (4 pages total)

a) X-ray Powder spectrum of CdS
b) IR spectra
c) $^{113}$Cd nmr spectra
Experimental and theoretical X-ray powder spectrum of crystalline CdS.

- Peak assignments based on wurtzite mineral (greenockite, jps card 41-1049)
- Cu K-alpha radiation.
IR spectra of a) thiocresol, b) (Et₄N)₄[Cd₁₀S₄Br₄(SR)₁₂], c) DMF, d) CdS nanocrystals. All spectra were recorded as KBr pellets.
$^{113}$Cd-nmr spectra of 1 before (a) and after heating (b). All spectra were recorded in DMSO-d$_6$. 

A

$[\text{Cd}_{10}S_4\text{Br}_4\text{(SR)}_{12}]^{4-}$

Cd$_{\text{outer}}$ 567 ppm

Cd$_{\text{inner}}$ 651 ppm

B

$[\text{Cd}_{10}S_4\text{(DMF)}_4\text{(SR)}_{12}]$

Cd$_{\text{inner}}$ 573 ppm

Cd$_{\text{inner}}$ 573 ppm