

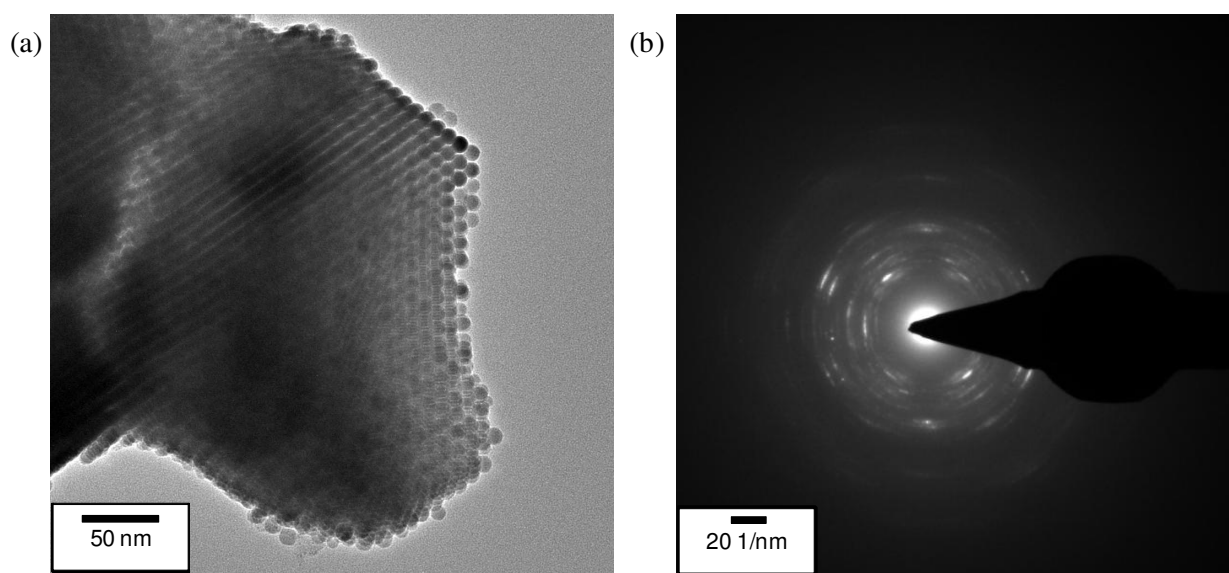
# Supporting Information

## Tuning the light absorption of $\text{Cu}_{1.97}\text{S}$ nanocrystals in supercrystal structures

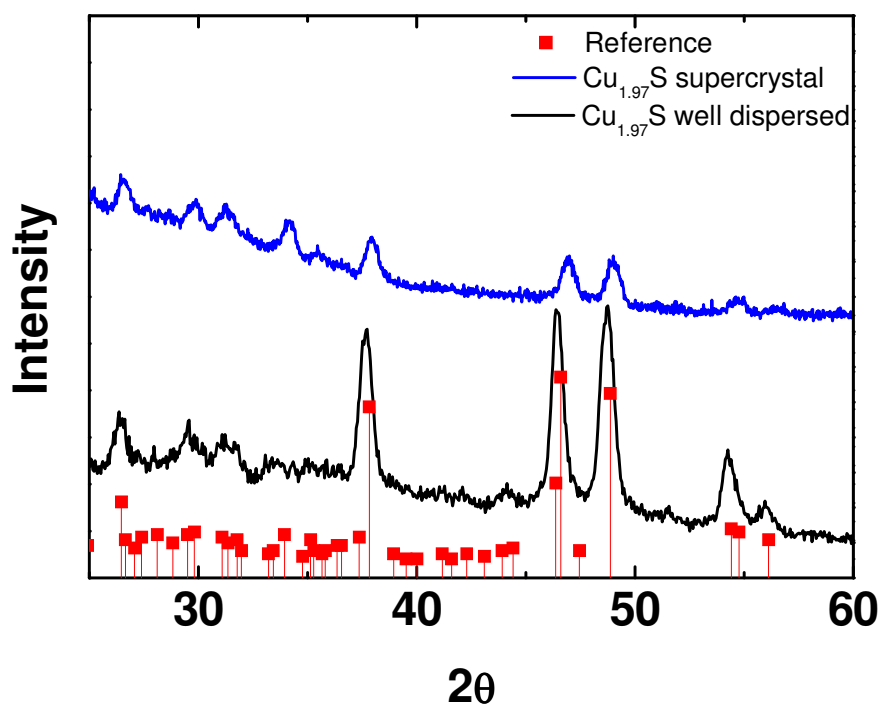
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**Figure S1.** (a) HRTEM micrograph of a supercrystal of  $\text{Cu}_{1.97}\text{S}$  nanocrystals. (b) Corresponding selected area electron diffraction (SAED) pattern, indicating that the nanocrystals are arranged in the supercrystal with a preferred orientation.



**Figure S2.** Powder XRD patterns of the  $\text{Cu}_{1.97}\text{S}$  supercrystals and the corresponding de-assembled nanocrystals after treatment with oleylamine. The peaks in both samples can be indexed to  $\text{Cu}_{1.97}\text{S}$  *djurleite* (JPCDS 20-0365), confirming that the crystalline structure of the nanocrystals remains unaltered after de-assembly.