Controlled Transformation of CdTe Nanoparticles Into Nanowires using L-cysteine

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CdTe nanocrystals were synthesized from individual nanoparticles via self-assembly at ambient light with L-Cysteine as stabilizer. Ambient light resulted in a self-assembly of nanoparticles into round-shaped nanocrystals. Length of produced nanocrystals ranged from 1000 nm to 3 μm and width ranged from 700 nm to 2.1 μm. The oxidation of Te2- in CdTe nanoparticles under the visible light resulted in the assembly of Nanocrystals consisting of several layers of individual nanoparticles. Transmission electron microscopy(TEM) and scanning electron microscopy(SEM) were performed to characterize the synthesized nanostructures. Energy-dispersive X-ray demonstrated the atomic percentage of nanocrystals.
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