SUPPORTING INFORMATION

Enhanced photothermal behavior derived from controllable self-assembly of $Cu_{1.94}S$ microstructures

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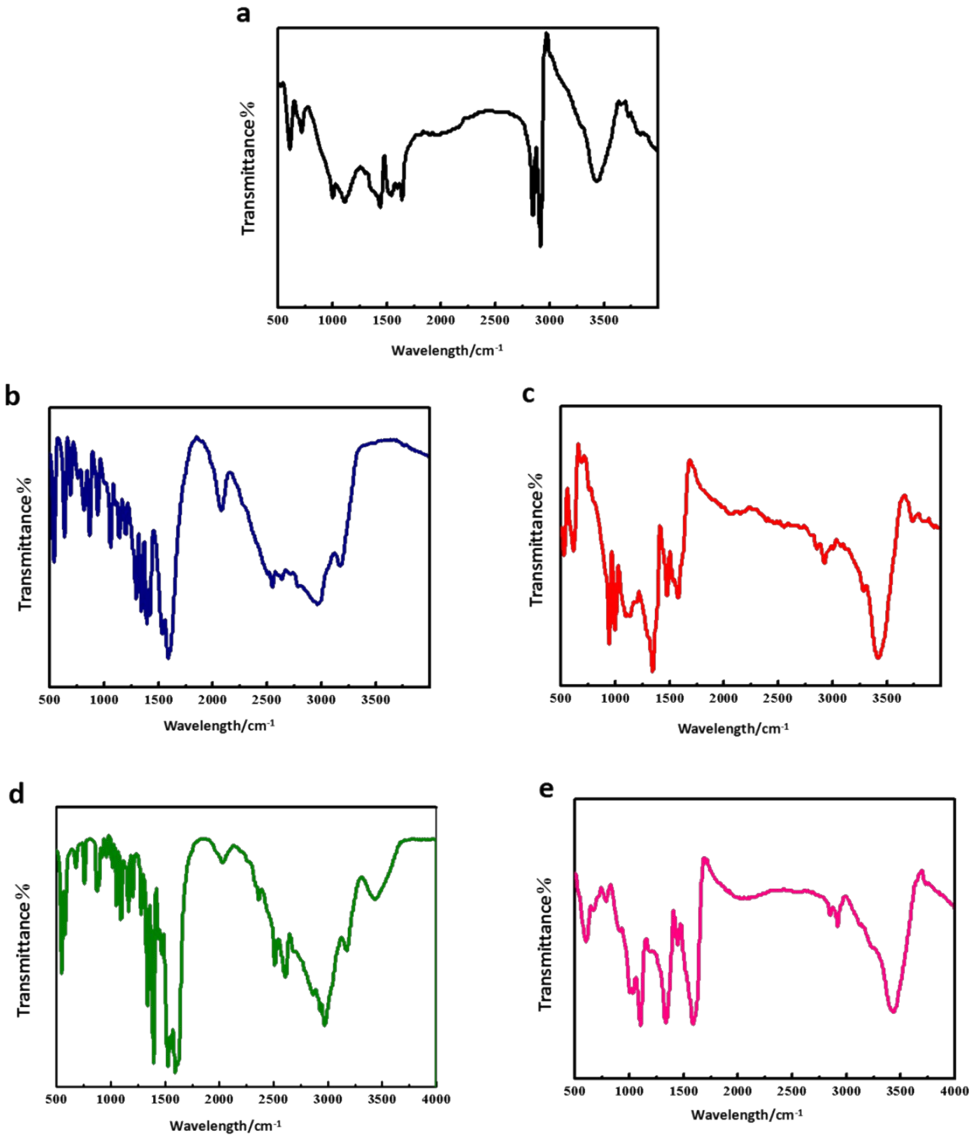

Fig. S1 FTIR spectra of (a) $Cu_{1.94}S$ QDs stabilized with OA/OM, (b) free cysteine ligands, (c) $Cu_{1.94}S$ NCs stabilized with cysteine, (d) free penicillamine ligands, (e) $Cu_{1.94}S$ NCs stabilized with penicillamine.

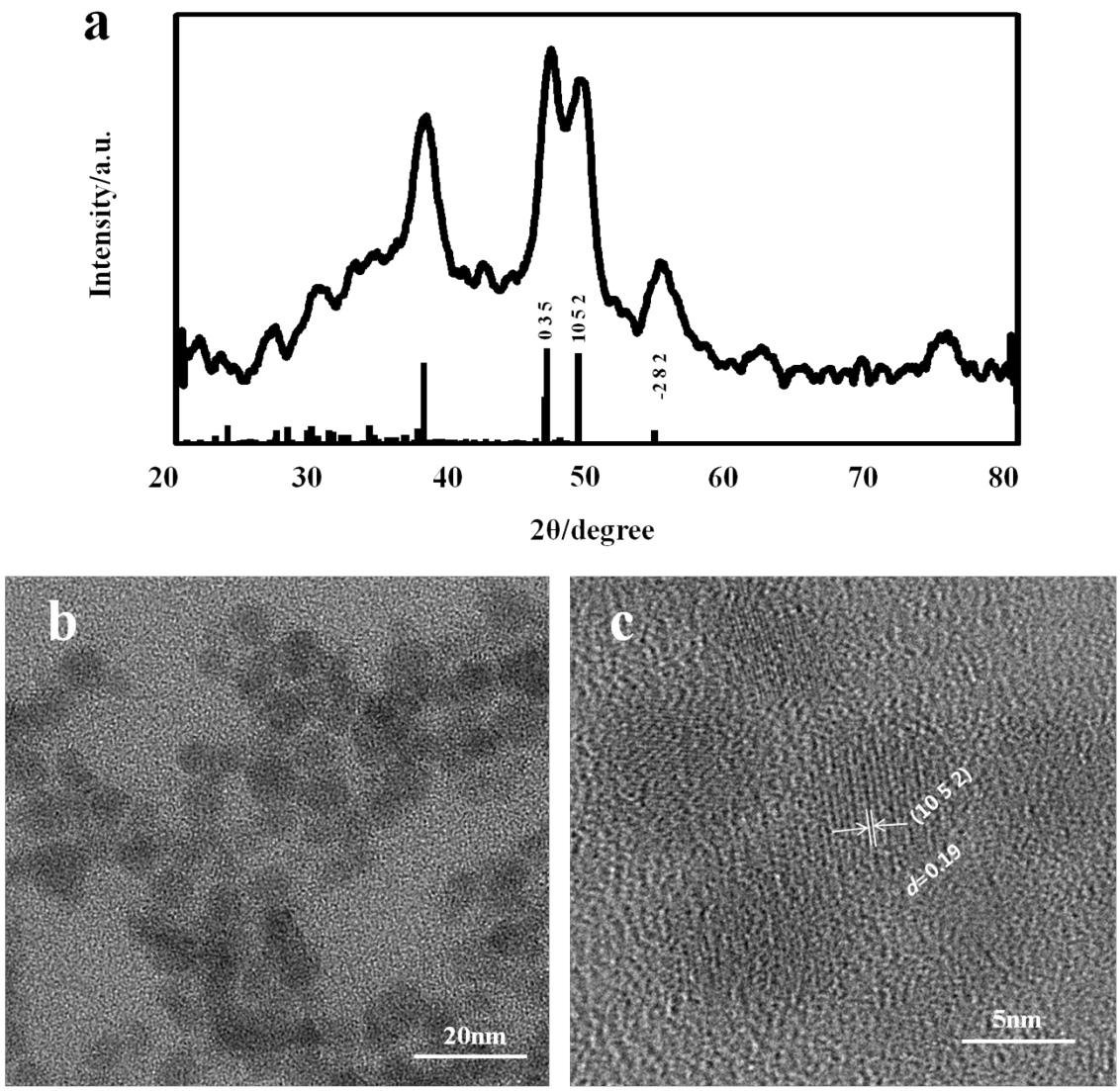

Fig. S2 (a) XRD patterns, (b) TEM image and (c) TEM image of cysteine-capped water-soluble $Cu_{1.94}S$ NCs.

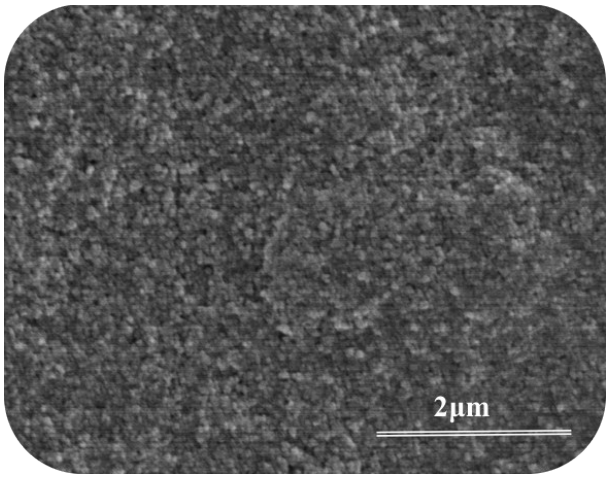

Fig. S3 SEM images of penicilliamine-capped water-soluble $Cu_{1.94}S$ self-assembly products for 3 days.

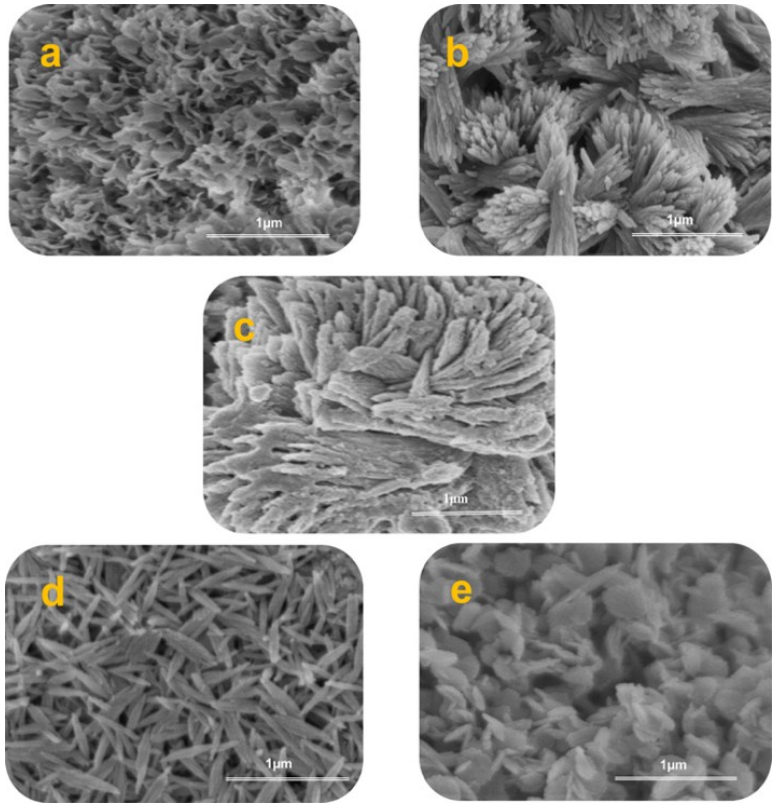

Fig. S4 (a~e) SEM images of assembly units of final 3D structures with water-soluble $Cu_{1.94}S$ NCs in W, W/E, W/M, W/M-3, W/M-4 for one day respectively.

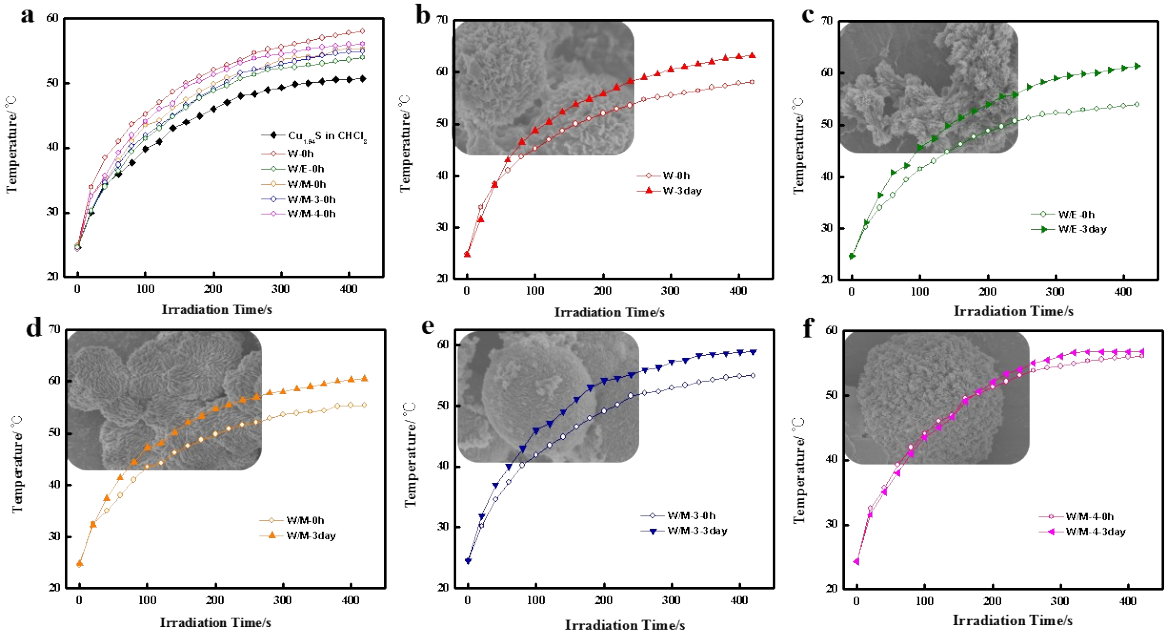

Fig. S5 (a)The temperature elevation of $Cu_{1.94}S$ QDs in $CHCl_3$ and cysteine capped $Cu_{1.94}S$ in 0h; (b-f) The temperature elevation of the $Cu_{1.94}S$ self-assemblies and corresponding starting isolated $Cu_{1.94}S$ NCs.