

## Supplementary Information

### Highly Luminescent Mono- and Multilayers of Immobilized CdTe Nanocrystals: Controlling Optical Properties Through Post Chemical Surface Modification

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#### Calculation of nanocrystal density:

The nanocrystal density was calculated from absorption coefficient of CdTe nanocrystals. The values used were  $9.7 \times 10^4$  and  $1.5 \times 10^5 \text{ M}^{-1} \text{ cm}^{-1}$  for 3.2 and 3.7 nm nanocrystals, respectively.

#### Fabrication of fluorescent patterns:

In the case of selective immobilization of the nanocrystals for fabrication of fluorescent patterns, the substrate was first treated with *n*-octadecyl trimethoxysilane (OTS) by the CVD method followed by vacuum-ultraviolet (VUV) lithography (wavelength: 172 nm) using a metal-on-quartz photomask. The OTS-patterned substrate was then treated with MPS as described in the main text. In this way, the region in which the OTS layer was decomposed by VUV irradiation was functionalized with MPS to form thiol patterns. The obtained substrate was then immersed in toluene solution containing CdTe nanocrystals for selective immobilization. After immobilization of the nanocrystals, the sample were rinsed with toluene and immersed in toluene solution containing thiol molecules at 80 °C for the appropriate times.