Electronic Supplementary Material (ESI) for RSC Advances.

Preferential growth of Au on CdSe quantum dots using Langmuir-Blodgett technique

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Supporting Information SI-1

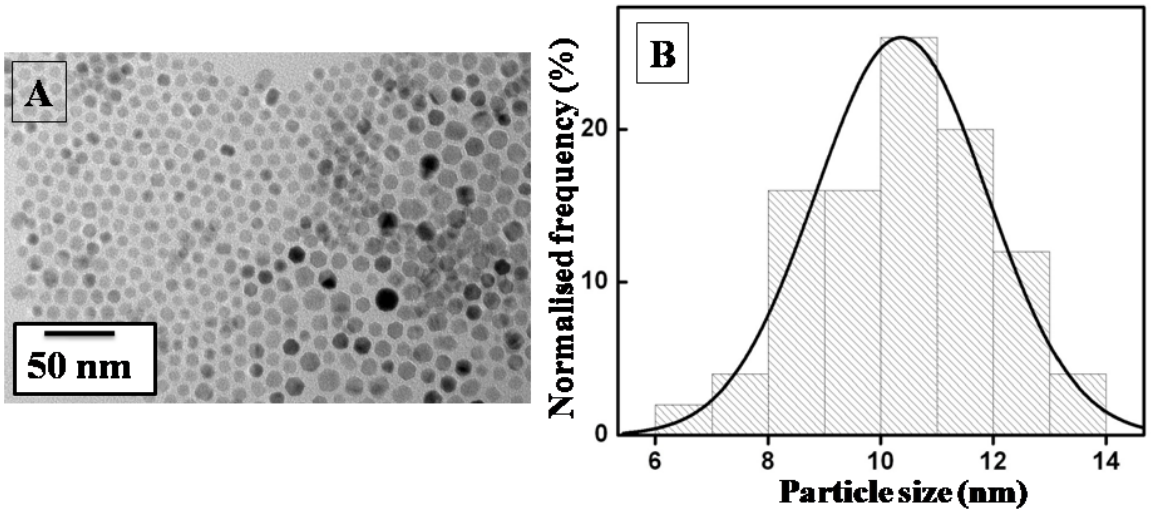

Figure SI-1: (A) TEM image of as prepared drop-casted CdSe QDs. **(B)** Particle size distribution histogram of CdSe QDs showing the average size to be 10.4 nm.

Supporting Information SI-2

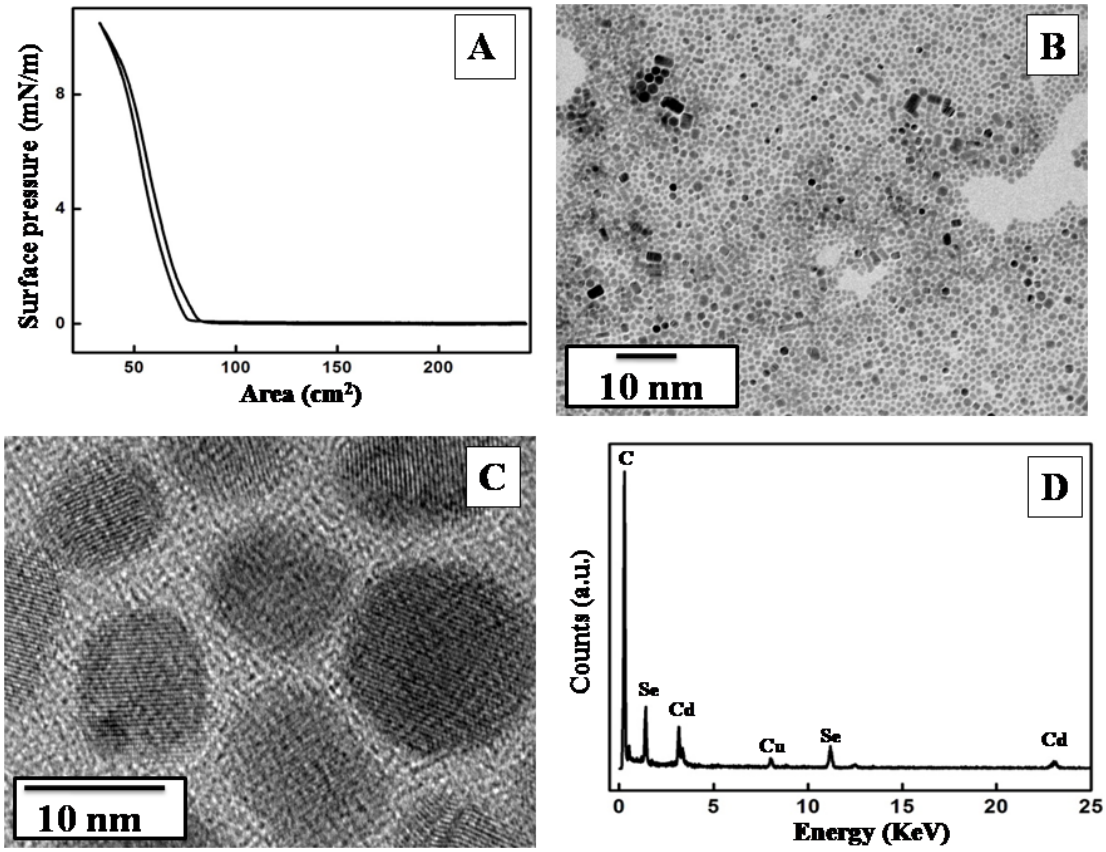

Figure SI-2: (A) Surface pressure-area (Π-A) isotherms of CdSe QDs on water subphase with 5 µl of sample at t=2 h for full cycle comprising of compression followed by expansion. **(B, C)** TEM and HRTEM images of CdSe QDs over water subphase in LB trough. The low resolution image clearly showed the long range alignment of these particles by LB technique. **(D)** EDX from the region shown in (B): the intense peaks for Cd, Se could be discerned.

Supporting Information SI-3

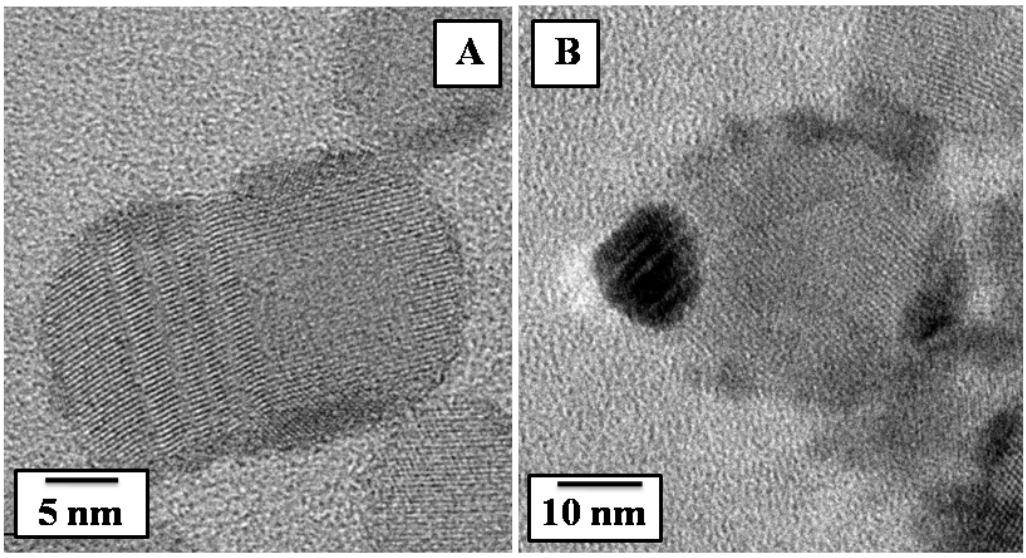

Figure SI-3: Drop casted CdSe-Au hybrids from solution based synthesis procedure. It could be clearly visible that the deposition Au on the CdSe particles was not limited to one side, but all over the surface. The reaction carried out for 20 min.