

Supporting Information I

The CdS, CdSe deposition on TiO₂ electrodes were carried out by previously reported SILAR method with some modifications.¹⁻³ For CdS deposition, TiO₂ electrodes were dipped in 0.03M cadmium nitrate tetrahydrate (Cd(NO₃)₂.4H₂O) solution in ethanol for 1 minute to adsorb Cd²⁺ ions on TiO₂ and then rinsed with ethanol to remove excess of Cd²⁺. The rinsed electrode was dipped into 0.03M sodium sulfide (Na₂S) solution in ethanol for 1 minute to form CdS and again rinsed with ethanol. This procedure was repeated for 5 times to get suitable CdS deposition on TiO₂. The CdS sensitized TiO₂ electrodes were transferred into argon filled glove bag for CdSe deposition using reported procedure of *Lee et al*³. The deposition of CdSe using SILAR was carried out inside argon filled glove bag with precursors solutions of 0.03M cadmium nitrate tetrahydrate (Cd(NO₃)₂.4H₂O) and 0.03M Se²⁻ solutions in ethanol. Se²⁻ solution was prepared by in situ reduction of SeO₂ using excess of NaBH₄. The CdSe SILAR was carried out by alternative dipping of CdS sensitized photoanode into Cd²⁺ and Se²⁻ solutions for 30 seconds each followed by rinsing with ethanol. This process was repeated for 5 cycles. The ZnS passivation layer was deposited on CdS/CdSe co-sensitized photoanode by SILAR using solutions of 0.1M Zinc acetate dihydrate (Zn(CH₃COO)₂.2H₂O) and 0.1M sodium sulfide Na₂S in methanol for 1 minute followed by rinsing in methanol. The ZnS SILAR was carried out twice. Figure SI-I shows the I-V curve for QDSSC with NCS as counter electrode.

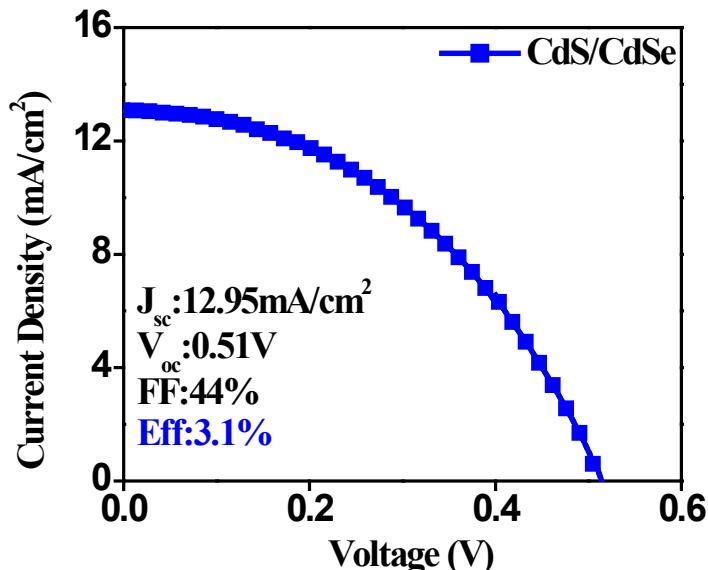


Figure 5: I-V characteristics for CdS/CdSe Quantum Dot Sensitized Solar Cells

Supporting Information II

Stability data for the NCS counter electrode was tested upto 50 cycles in the same CV assembly mentioned before.

