

Graphene/CdS Quantum Dots/Polyoxometalate Composite Films For Efficient Photoelectrochemical Water splitting and Pollutant Degradation

Meng Wang, ^{a,b}Xinke Shang^{a,b}, Xuelian Yu^a, Rongji Liu^a, Guangjin Zhang ^{a*}, and Hongbin Cao^{a*}

^a Key laboratory of Green Process Engineering, Institute of Process Engineering, Chinese Academy of Science,
100190, Beijing, China

^b University of Chinese Academy of Sciences, 100049, Beijing, China

Supplementary Results

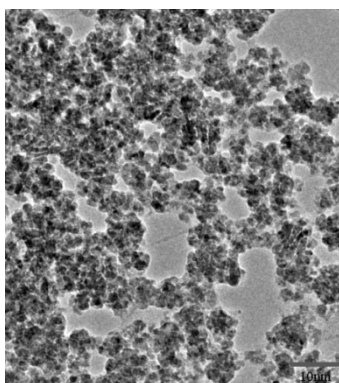


Figure S1 TEM image of the CdS quantum dots.

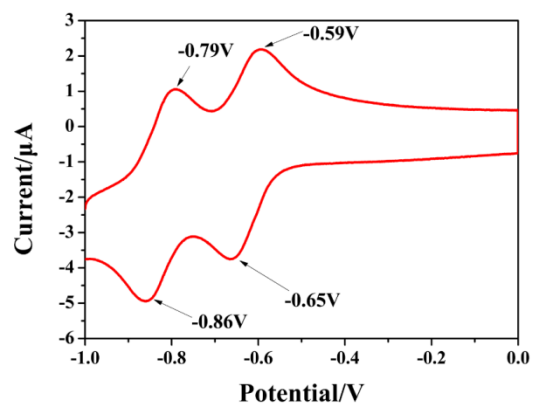


Figure S2 CV curves of 0.5 mM H₂W₁₂ in 0.1 M phosphate buffer solution at pH 8.0.

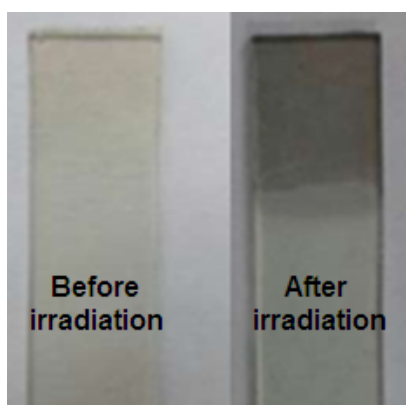


Figure S3 Colors of the composite films before and after UV irradiation.

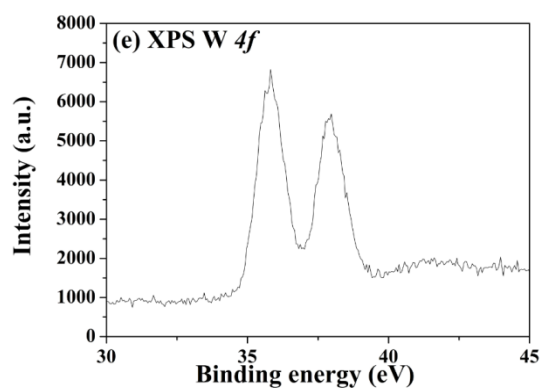


Figure S4 XPS spectrum of W 4f of the rGO/CdS/H₂W₁₂ film.

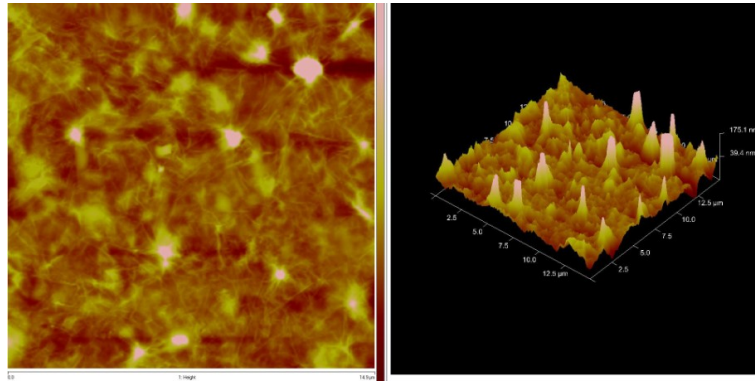


Figure S5 AFM image of (rGO/CdS/H₂W12)₆ films modified silicon substrate.

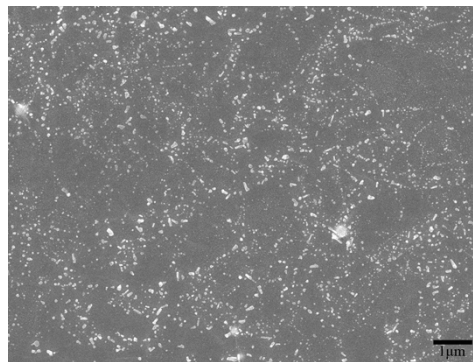


Figure S6 SEM image of (rGO/CdS/H₂W12)₆ films modified silicon substrate.

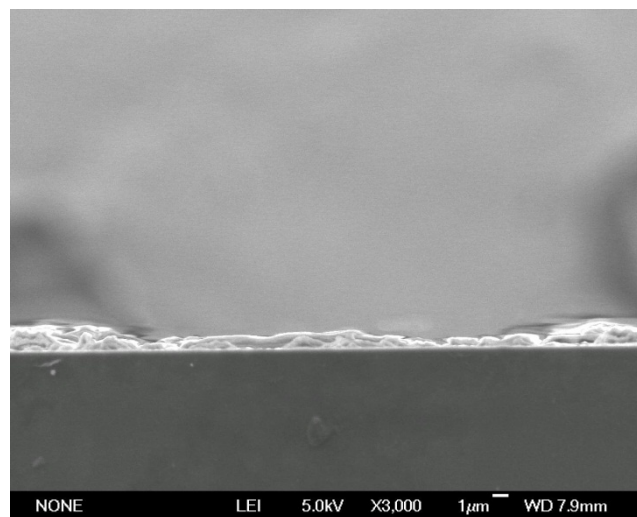


Figure S7 Cross section image of (rGO/CdS/H₂W12)₆ films on silicon substrate

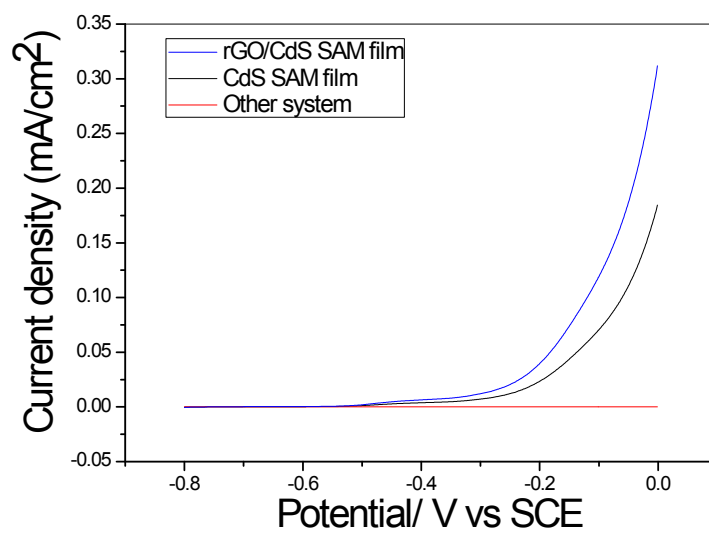


Figure S7, Comparison of PEC curves of CdS SAM film with rGO/SAM film and other system (rGO, H2W12, rGO/H2W12 SAM film)

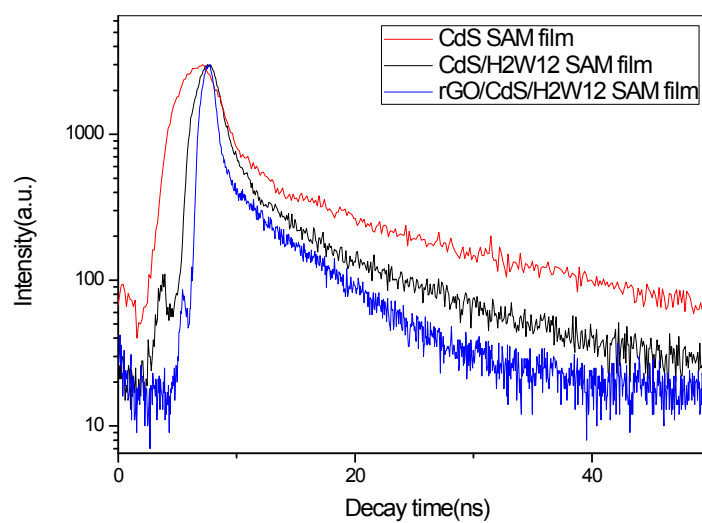


Figure S8, Time-resolved luminescence decay of different SAM films.

