Electronic Supplementary Information

Study on Water Splitting Characteristics for CdS Nanosheets Driven by the Coupling Effect between Photocatalysis and Piezoelectricity

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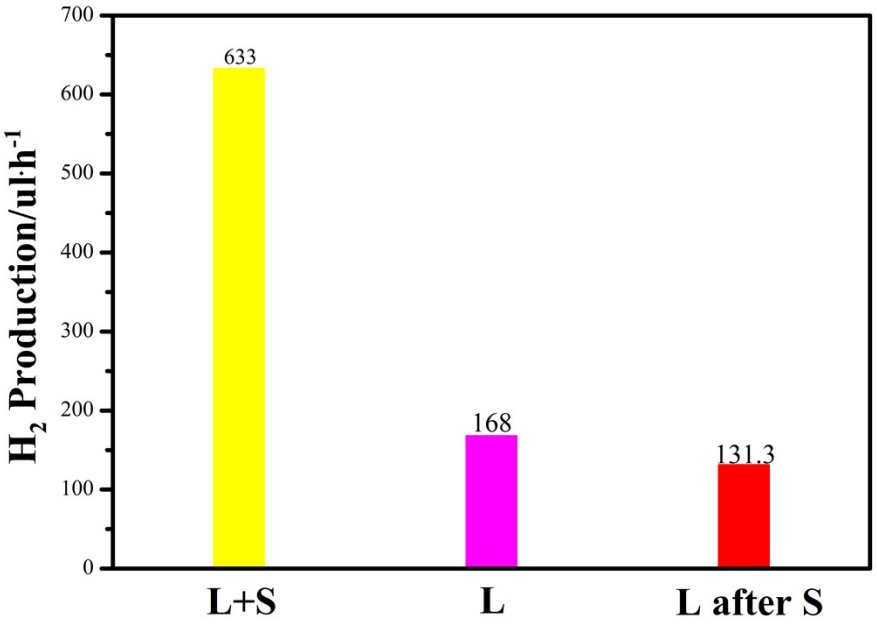

Fig. S1. the rate of water-splitting hydrogen production at different conditions(L after S means the photocatalytic reaction is taking place after ultrasound for 1 hour)

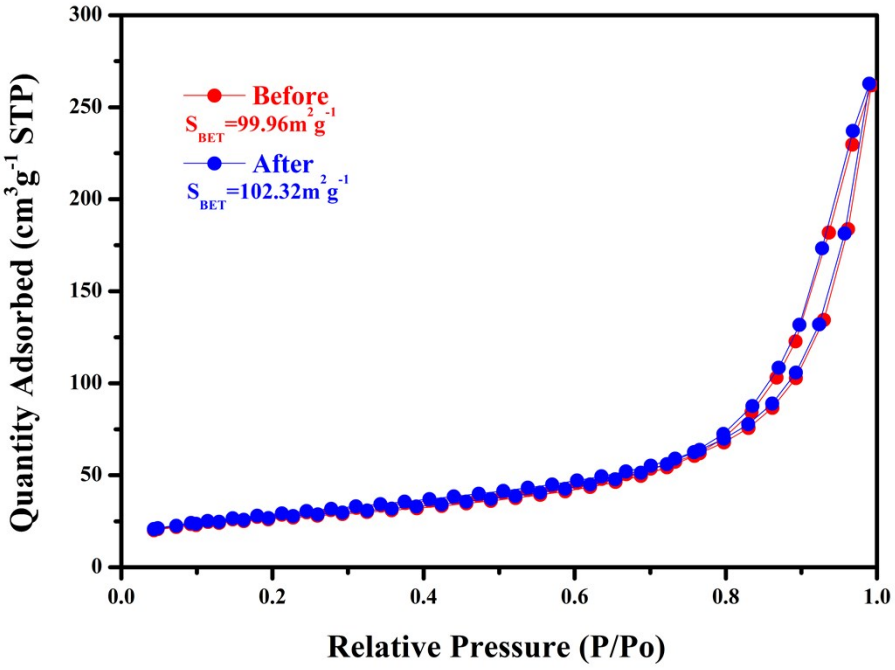

Fig.S2. the specific surface area pattern of the sample before and after the reaction

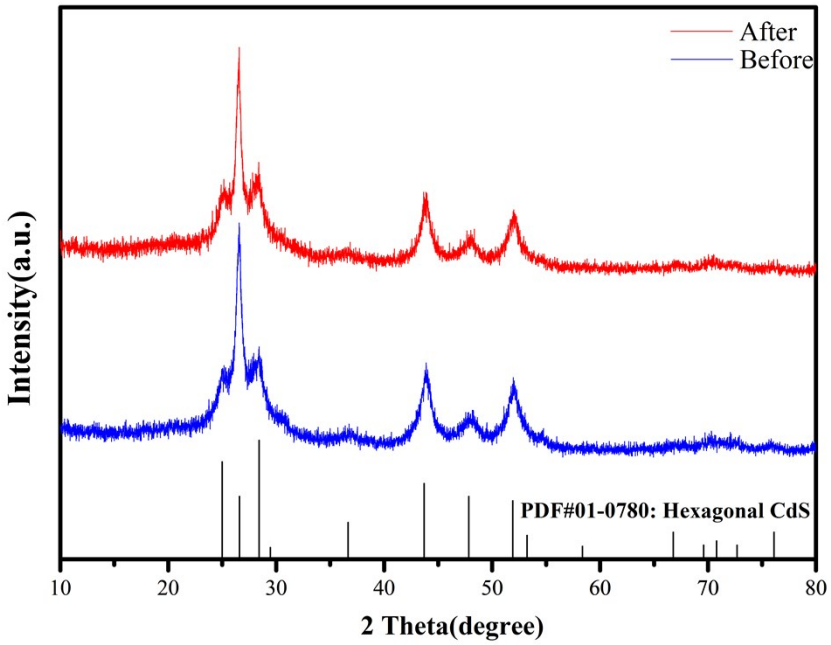

Fig.S3. the XRD pattern of the sample before and after the reaction

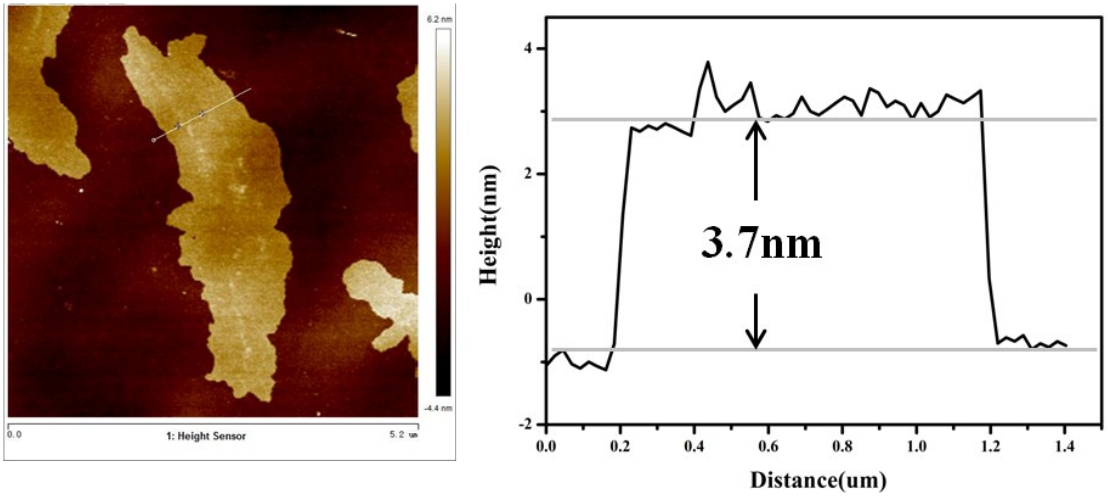

Fig. S4 the AFM pattern of the sample after the reaction

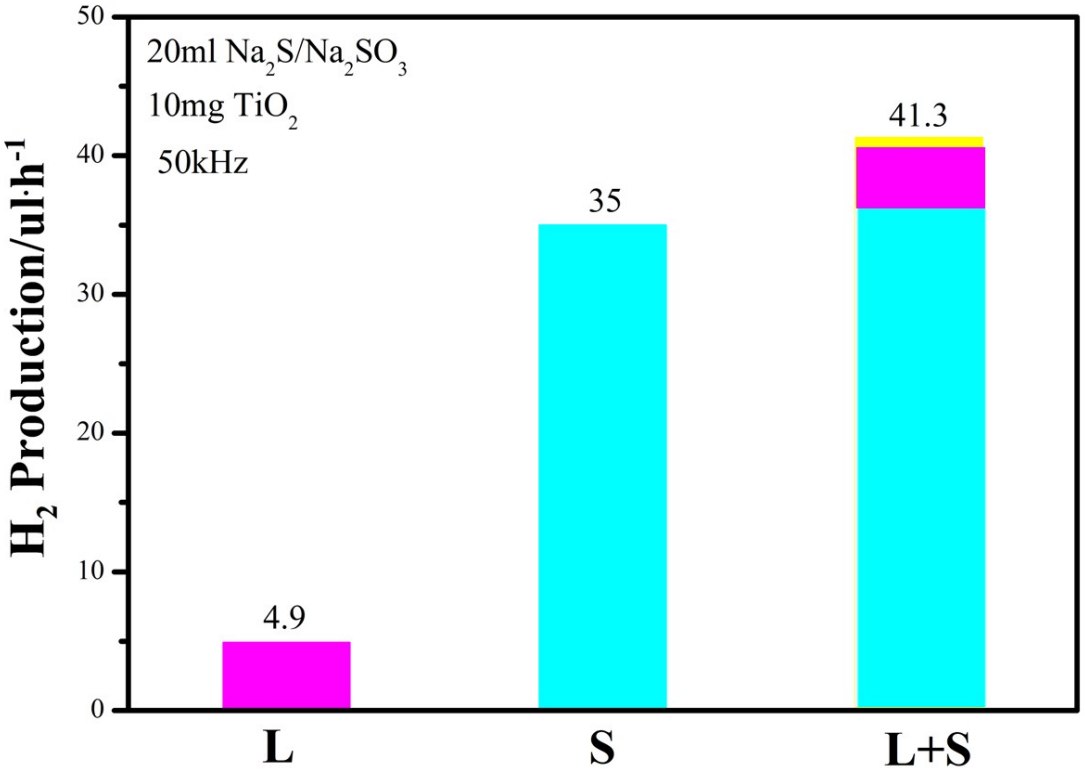

Fig. S5. The rate of water-splitting hydrogen production of TiO_2 at different conditions(The light here is Xenon lamp without filter)

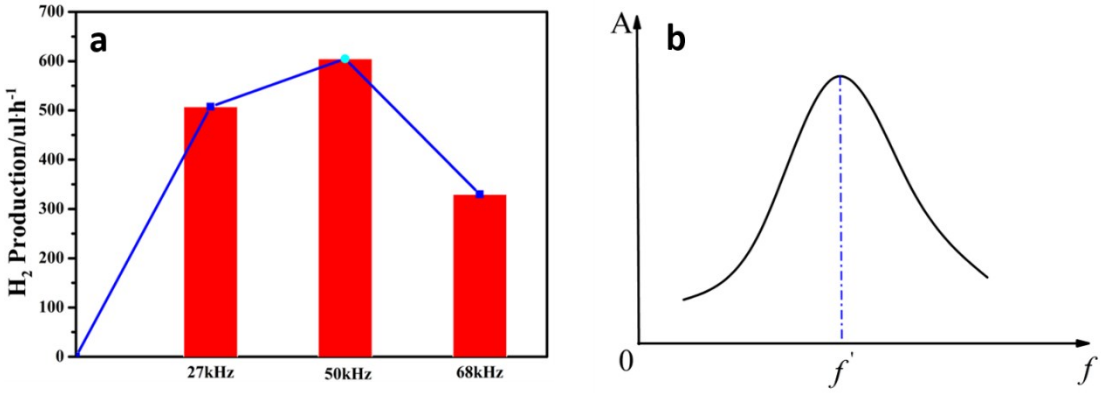

Figure S6 (a) the rate of hydrogen evolution varies with ultrasonic frequency. (b) the amplitude of forced vibration changes with frequency (f' is the resonance frequency of some substance)

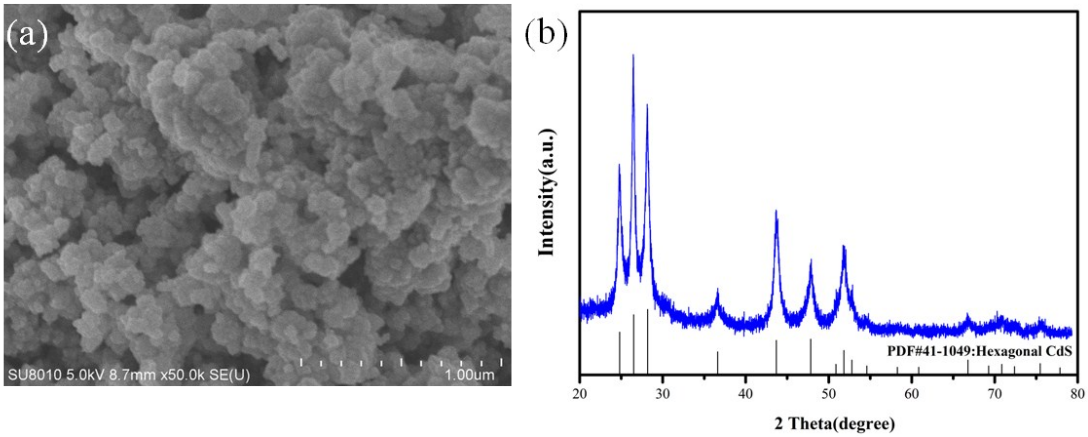

Fig. S7.(a) and (b) the SEM pattern and the XRD pattern of CdS-P, respectively；

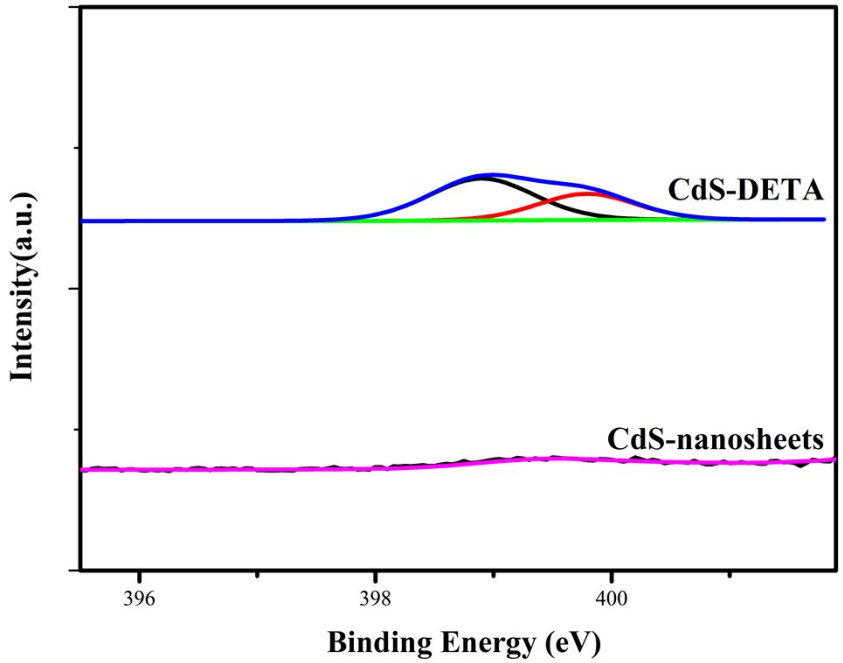

Figure S8 the XPS spectrum of the N element in CdS-DETA and CdS nanosheets.

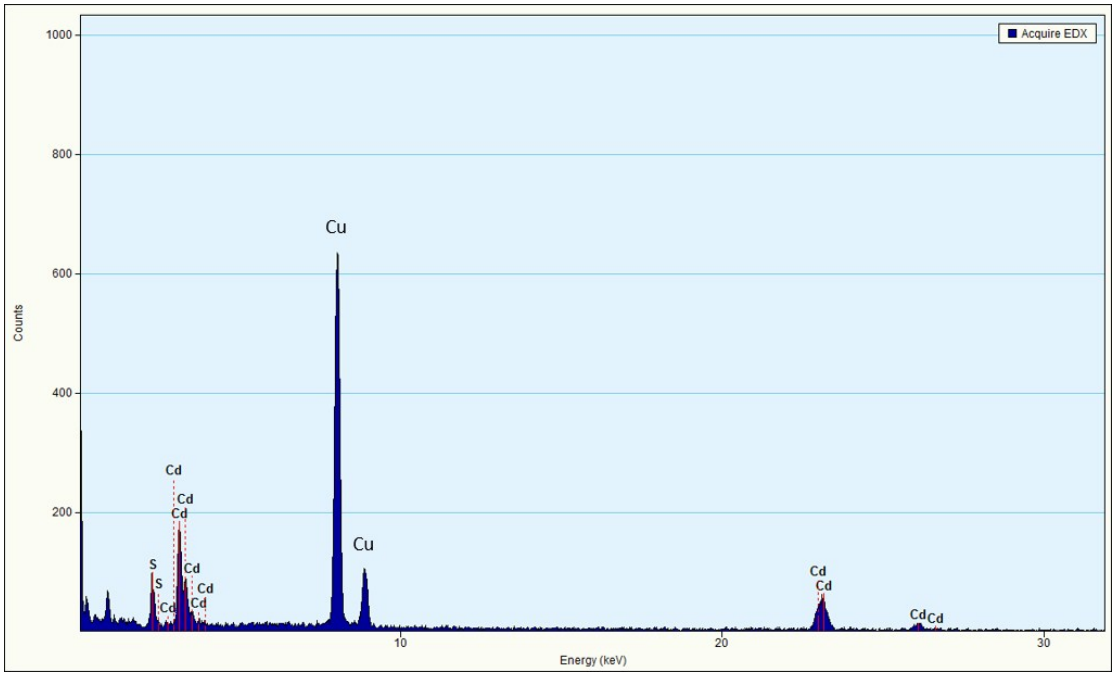

Figure S9 the EDX spectrum of CdS nanosheets. The detected Cu signal arises from the Cu substrate.

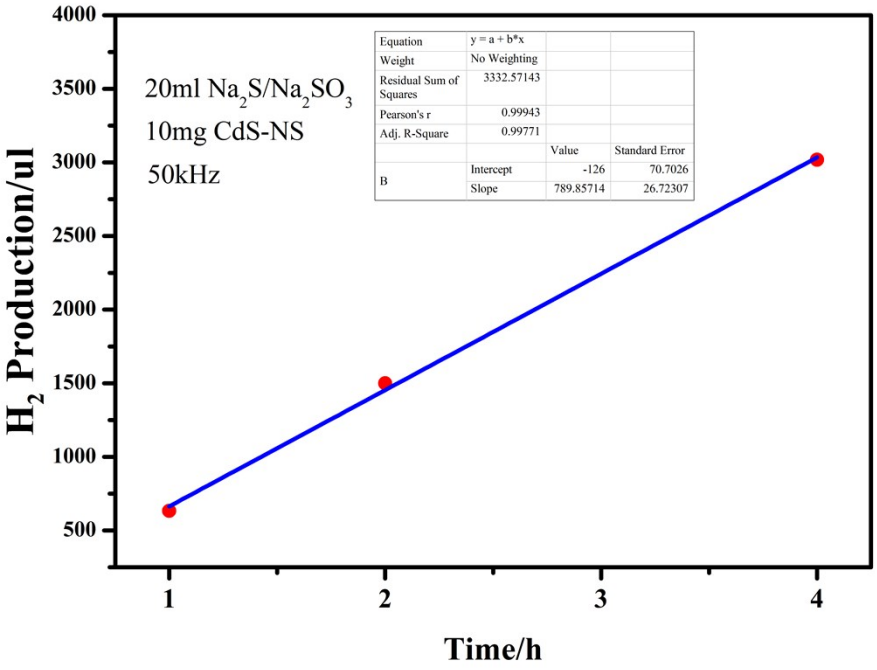

Figure S10 the evolution curves of hydrogen production over time.