

**Supporting Information for**

**MoS<sub>2</sub>-wrapped Mn<sub>0.2</sub>Cd<sub>0.8</sub>S nanospheres towards efficient photocatalytic H<sub>2</sub>  
generation and CO<sub>2</sub> reduction**

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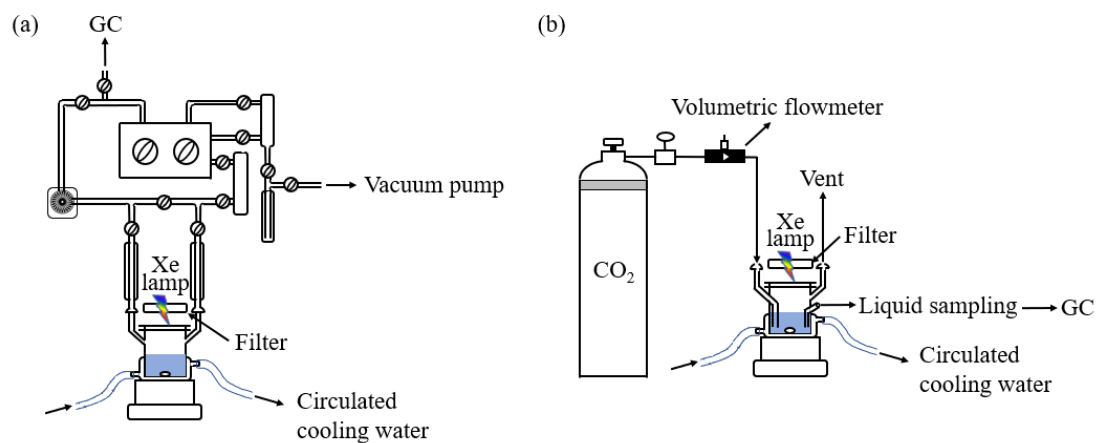


Fig. S1 Schematic of experimental setup for (a) photocatalytic H<sub>2</sub> production and (b) photocatalytic reduction of CO<sub>2</sub>

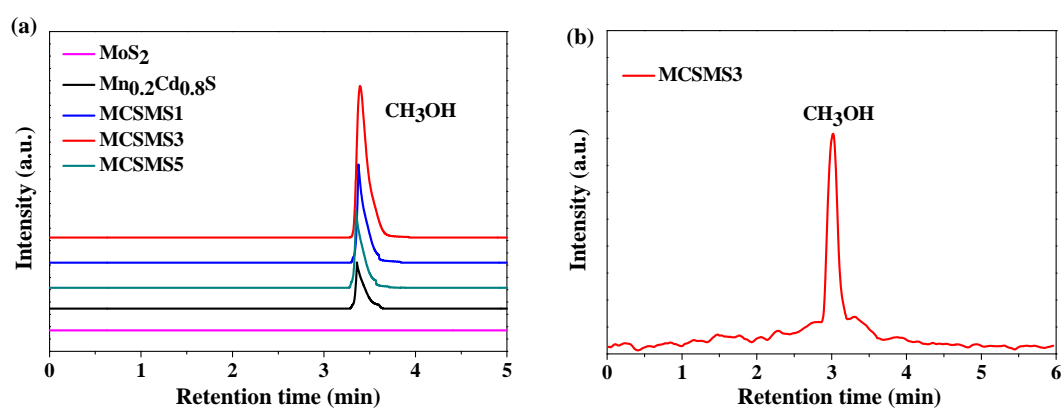


Fig. S2 (a) GC chromatograms and (b) HPLC chromatogram for the as-synthesized samples after 4 h of irradiation

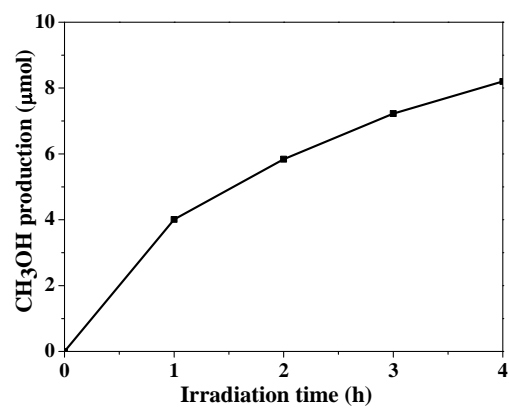


Fig. S3 Time courses of CH<sub>3</sub>OH production over MCSMS3 using NaHCO<sub>3</sub> (0.1 M) instead of bubbling CO<sub>2</sub>