Supporting Information

*In situ* synthesis of ultrafine metallic MoO$_2$/carbon nitride nanosheets

for efficient photocatalytic hydrogen generation: Prominent
cocatalytic effect

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Fig. S1 Schematic illustration of CNS and MoO$_2$/CN preparation procedures.

Fig. S2 SEM images of CN, CNS, 1-CNS and MoO$_2$. 
Fig. S3 STEM image of 1-CNS with large scale.

Fig. S4 XRD pattern of pure MoO$_2$. 

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MoO$_2$
Fig. S5 FITR spectra of CN, CNS and 1-CNS.

Fig. S6 XPS spectra of C 1s and N 1s of CNS.
Fig. S7 XPS spectra of Mo 3d of 1-CNS and MoO$_2$.

Fig. S8 UV–vis absorption spectra of CN, CNS, and different mass loading of MoO$_2$ on CNS.
Fig. S9 The ratio of photocatalytic H₂ production performance of CN modified by Mo-based cocatalysts to Pt-CN.

Fig. S10 TEM and HRTEM images of 1-CNS after photocatalytic H₂ production reaction.
Fig. S11 XRD spectra of 1-CNS before and after photocatalytic reaction.

Fig. S12 LSV curves of MoO$_2$ and 20 wt% Pt/C in N$_2$-saturated 1 M KOH solution.

References

