

## Supporting information

### Photochemical deposition of amorphous MoS<sub>x</sub> on one-dimensional NaNbO<sub>3</sub>-CdS heterojunction photocatalyst for highly efficient visible-light-driven hydrogen evolution

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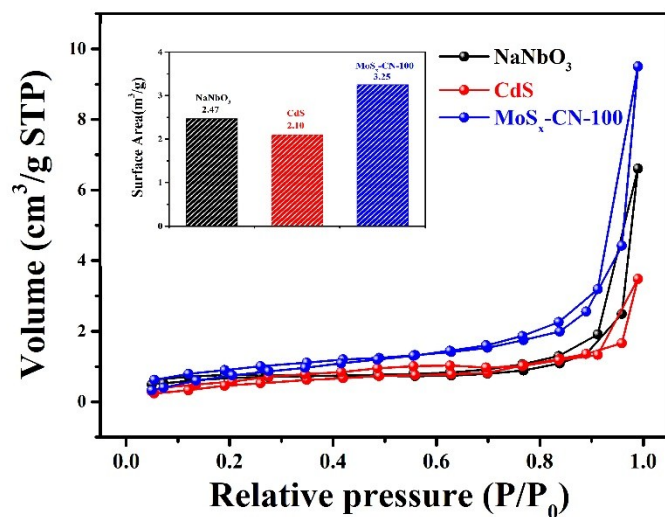


Fig. S1 Nitrogen adsorption–desorption isotherms of NaNbO<sub>3</sub>, CdS and MoS<sub>x</sub>-CN-100. Inset: The BET surface area of NaNbO<sub>3</sub>, CdS and MoS<sub>x</sub>-CN-100.

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Table S1. A comparison of the hydrogen evolution performance between our MoS<sub>x</sub>-CN and CdS, NaNbO<sub>3</sub> based photocatalysts

No.	photocatalysts	Light source (Wavelength)	Sacrificial solution	H <sub>2</sub> mmol/h/g	Ref.
1	MoS <sub>x</sub> -NaNbO <sub>3</sub> -CdS	Xe lamp 300W(>400 nm)	Lactic acid	2.386	This work
2	CdS/Ni-MOF	Xe lamp 300W (>420nm)	Lactic acid	2.508	1
3	CdS/Zn <sub>2</sub> GeO <sub>4</sub>	Xe lamp 300W (>420nm)	Na <sub>2</sub> SO <sub>3</sub> &Na <sub>2</sub> S	1.72	2
4	CdS/MoS <sub>2</sub>	Xe lamp 300W (>420nm)	Lactic acid	1.4	3
5	g-C <sub>3</sub> N <sub>4</sub> /Au/CdS	Xe lamp 300W (>420nm)	Lactic acid	1.1	4
6	Pt-rGO-NaNbO <sub>3</sub>	Xe lamp 300W (>420nm)	Methanol	2.342	5
7	Pt-NaNbO <sub>3</sub>	Xe lamp 300W	Methanol	0.266	6
8	Ca-NaNbO <sub>3</sub> -C <sub>3</sub> N <sub>4</sub>	Solar irradiation (~900W/m <sup>2</sup> )	Methanol	2.95	7
9	NaNbO <sub>3</sub> -Pt	Xe lamp 400W (>300nm)	Lactic acid	1.12	8

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