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Enhanced photocatalytic H₂ production of Mn_{0.5}Cd_{0.5}S solid solution through loading transition metal sulfides XS (X=Mo, Cu, Pd) cocatalysts

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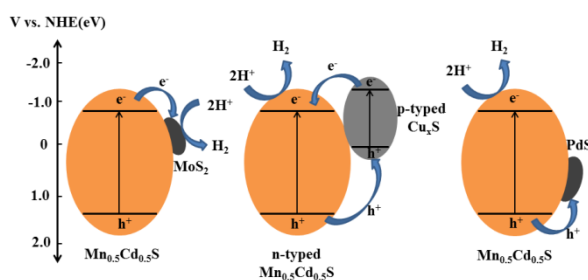
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Graphical Abstract



Highlights

- 1: Mn_{0.5}Cd_{0.5}S was obtained by conventional hydrothermal method
- 2: XS (X = Mo, Cu and Pd) was loaded as cocatalyst via facile techniques
- 3: PdS was more effective compared to CuS and PdS towards hydrogen evolution reaction
- 4: Composites were highly stable during the recycling tests

Abstract: Development of highly efficient cocatalyst is important towards photocatalytic H₂ production. Herein, a series of transition metal sulfides XS (X=Mo, Cu, Pd) as cocatalysts have been successfully grown on Mn_{0.5}Cd_{0.5}S photocatalyst through photo-reduction or in-situ deposition method, respectively. Among them, the

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