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Few layered black phosphorus/MoS₂ nanohybrid:

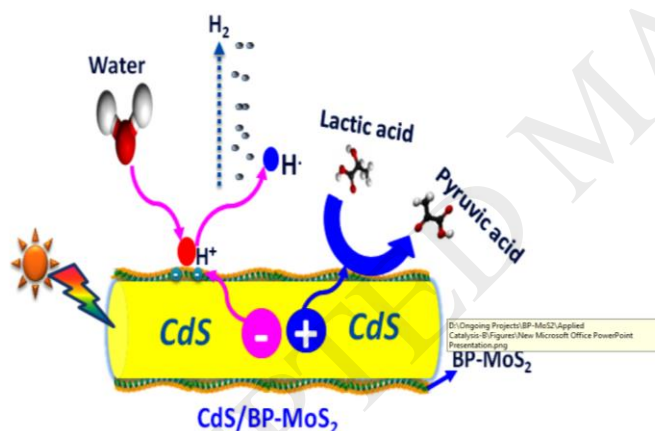
A promising co-catalyst for solar driven hydrogen evolution

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Graphical abstract



We designed a novel highly robust, noble-metal-free photocatalytic nanohybrid BP-MoS₂/CdS for solar-driven hydrogen evolution by water splitting. The designed nanohybrid exhibits a high photocatalytic hydrogen evolution rate of 183.24 mmol·g⁻¹·h⁻¹ under sunlight irradiation.

Research Highlights

- A noble-metal-free catalysts for the production of sustainable and green H₂ fuel.
- A new BP-MoS₂ co-catalyst on CdS nanorods.
- A high hydrogen evolution rate of 183.24 mmol·g⁻¹·h⁻¹ under sunlight irradiation.
- The designed nanohybrid is stable for up to 50 h.

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