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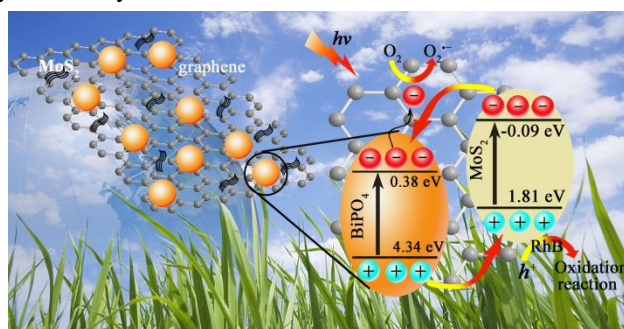
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Graphical abstract

The presence of MoS₂ and graphene nanosheets can efficiently inhibit charge recombination, facilitate interfacial charge transfer and supply abundant reactive sites, thereby resulting in the enhanced photocatalytic activity.



Research highlights

- A new ternary BiPO₄-MoS₂/graphene composite was successfully synthesized.
- The synergetic effects of graphene and MoS₂ on the photoactivities were discussed.
- Mechanism of the enhanced photocatalytic activity was illuminated.

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