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Doping Strategy to Promote the Charge Separation in BiVO₄ Photoanodes

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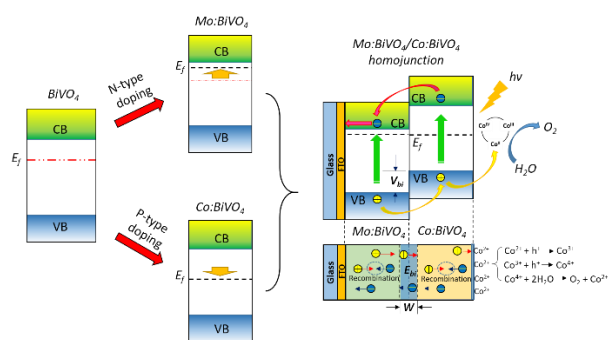
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Graphical abstract



Highlights:

Mo:BiVO₄/Co:BiVO₄ homojunction photoanodes were fabricated

The built in electric field of the homojunction promote the bulk charge separation

surface exposed Co²⁺ ions in Co:BiVO₄ improve the interfacial charge separation

Co²⁺ doping inside Co:BiVO₄ compensate the intrinsic n-type defects in BiVO₄

varying Co contents dope inside Co:BiVO₄ to facilitate the bulk charge separation

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