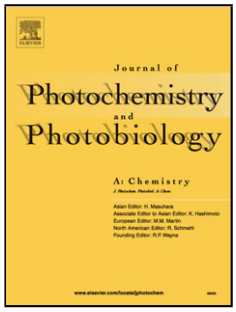

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Facial Boron Incorporation in Hematite Photoanode for Enhanced Photoelectrochemical Water Oxidation

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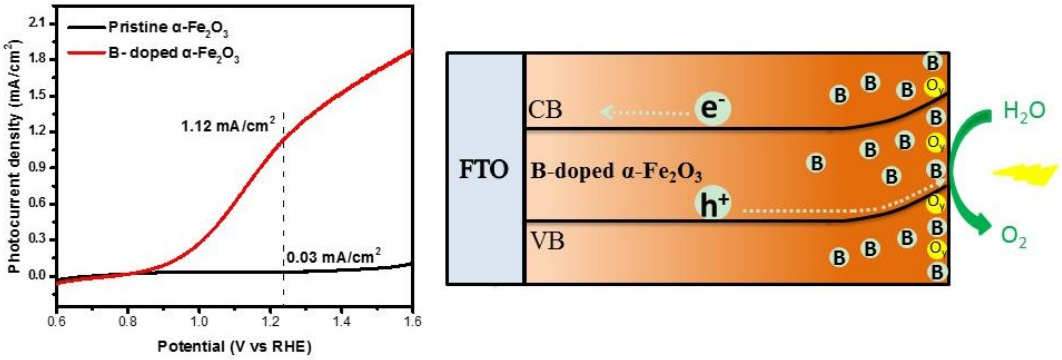
Graphical Abstract:



Highlights

- Boron incorporated hematite photoanodes were successfully fabricated.
- Best boron doped photoanode showed 37 times photocurrent enhancement compared to pristine hematite.
- The gradient distribution of boron across hematite nanostructure induced build-in electric field, promoting the charge separation.
- The boron doped hematite featured more oxygen vacancies which improved the conductivity.