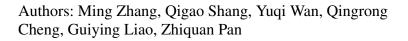
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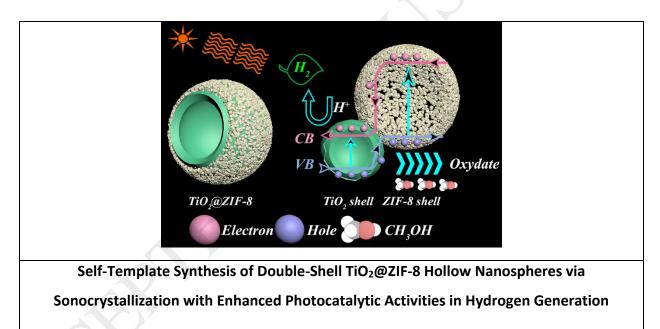
ACCEPTED MANUSCRIPT

Self-Template Synthesis of Double-Shell TiO₂@ZIF-8 Hollow Nanospheres via Sonocrystallization with Enhanced Photocatalytic Activities in Hydrogen Generation

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Graphical abstract

M. Zhang, Q.G. Shang, Y.Q. Wan, Q.R. Cheng, G.Y. Liao, Z.Q. Pan

A double-shell $TiO_2@ZIF-8$ hybrid composite, synthesized via carboxylation and sonocrystallization, was fully characterized. The efficient capacity of H₂ evolution driven by visible light and its photocatalytic pathway was studied. The results showed that photocatalytic H₂ evolution over hollow TiO₂ can be greatly improved with the use of ZIF-8 as active-sites supplier and charge separator.

Highlights

• TiO₂@ZIF-8 hybrid composites were synthesized rapidly via sonocrystallization

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