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Incorporation of CoO nanoparticles in 3D marigold flower-like hierarchical architecture $MnCo_2O_4$ for highly boosting solar light photo-oxidation and reduction ability

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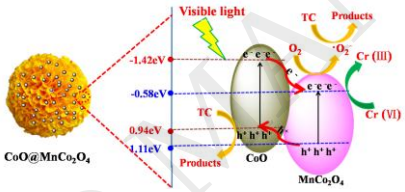
Graphical Abstract



Highlights

- The 3D marigold flower-like hierarchical $CoO@MnCo_2O_4$ photocatalyst was constructed by a facile synthesis strategy.
- The hybrid shows remarkable performance for PCO of tetracycline (TC) and excellent PCR of hexavalent chromium (Cr (VI)) under visible light irradiation owing to the e^- and h^+ can play their own roles.
- The photoactivity catalyst can be used for treatment a mixture containing of TC/Cr (VI) and exhibited promoted each other's removal efficiency in photocatalytic reaction system.