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Authors: Qixing Zhou, Shuanglong Ma, Sihui Zhan

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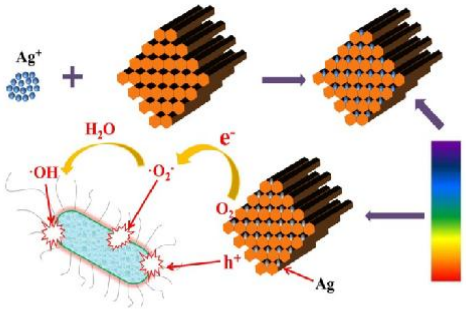
ACCEPTED MANUSCRIPT

Superior photocatalytic disinfection effect of Ag-3D ordered mesoporous CeO_2 under visible light

Qixing Zhou*, Shuanglong Ma, Sihui Zhan

Key Laboratory of Pollution Processes and Environmental Criteria (Ministry of Education) / Tianjin Key Laboratory of Environmental Remediation and Pollution Control, College of Environmental Science and Engineering, Nankai University, Tianjin 300350, China

Graphical abstract



Highlights

- Mesoporous Ag/CeO_2 nanocomposites were prepared by combining nanocasting method.
- The mesoporous Ag/CeO_2 exhibited superior photocatalytic disinfection efficiency.
- Doping Ag species can enhance the concentration of Ce^{3+} ions and oxygen vacancies.
- The midgap states can lower the threshold of incident photon energy.
- This work provides a new method for disinfection using solar radiation.

ABSTRACT: Ordered mesoporous Ag/CeO_2 nanocomposites were prepared by combining nanocasting with photo-assisted reduction. The heterogeneous

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