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Substrates

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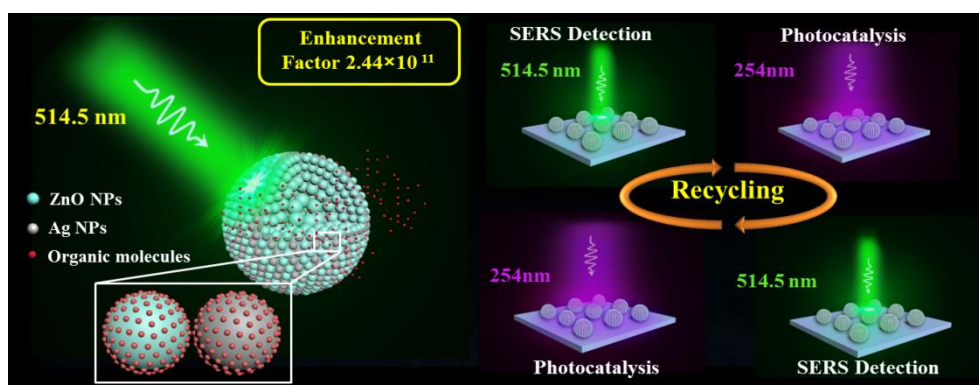
Template-free Synthesis of Porous ZnO/Ag Microspheres as Recyclable and Ultra-sensitive SERS Substrates

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Graphical abstract



Highlights

- Porous ZnO microspheres were fabricated without any template.
- Porous structure improved the light trapping for the sensitive response.
- Ag nanoparticles were decorated in situ on ZnO by photochemical reaction.
- Metal/semiconductor hybrid SERS substrate could be self-cleaned for recycling.
- Synergic enhancement mechanism of the multi-effects to the SERS was analyzed.

Abstract: The porous structured zinc oxide (ZnO) microspheres decorated with silver nanoparticles (Ag NPs) have been fabricated as surface-enhanced Raman scattering (SERS) substrate for ultra-sensitive, highly reproducible and stable

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