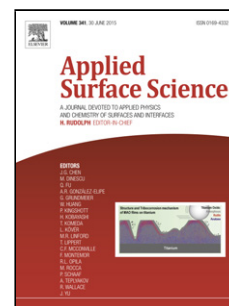


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Synthesis and improved SERS performance of silver nanoparticles-decorated surface mesoporous silica microspheres

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GRAPHICAL ABSTRACT

Highlights

- ▶ Two kinds of hybrid microspheres ($\text{MSiO}_2@\text{Ag}$ and $\text{SSiO}_2@\text{Ag}$) were prepared.
- ▶ Improved SERS performance of $\text{MSiO}_2@\text{Ag}$ than that of $\text{SSiO}_2@\text{Ag}$ was obtained.
- ▶ The $\text{MSiO}_2@\text{Ag}$ microspheres also show a good reproducibility of SERS signal with RSD of around 10%.
- ▶ The detection limit of MP by using $\text{MSiO}_2@\text{Ag}$ microspheres was 1×10^{-3} ppm.

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