Electronic Supplementary Material (ESI) for New Journal of Chemistry.
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Supporting Information

Recyclable SERS substrates based on Fe_2O_3-Ag hybrid hollow microspheres with crumpled surfaces

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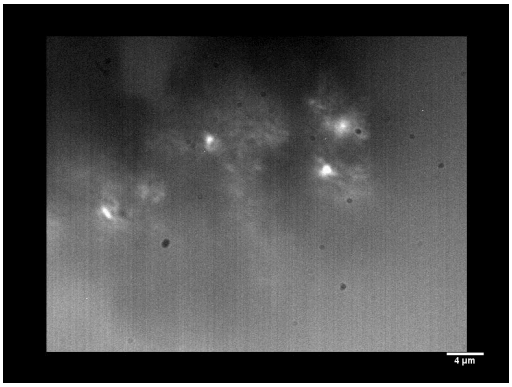


Fig. S1 Dark-field optical image of Ag nanoparticles in FAHMs. The scale bar is 4μm.

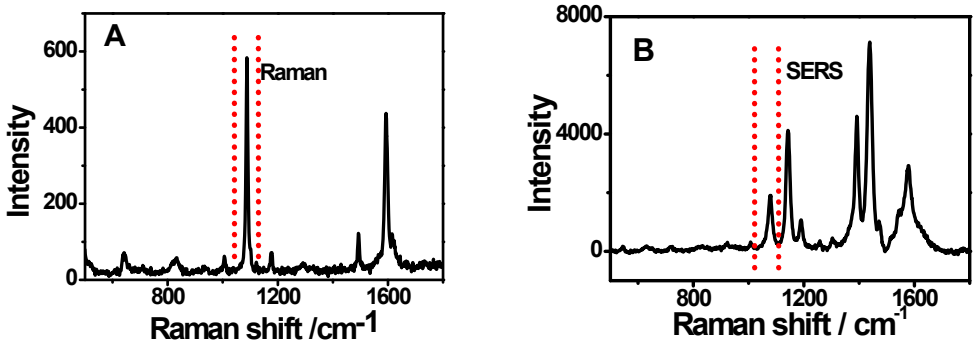
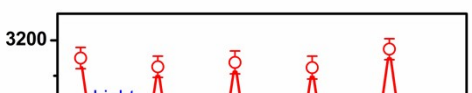


Fig. S2 (A) Raman spectrum of 0.1 M 4-ABT, and (B) SERS spectrum of 10^{-5} M 4-ABT obtained on FAHMs.

Fig. S3 Light-assisted cleaning performance of 4-ABT on FAHMs by tracing the peak intensity at 1077 cm^{-1}.



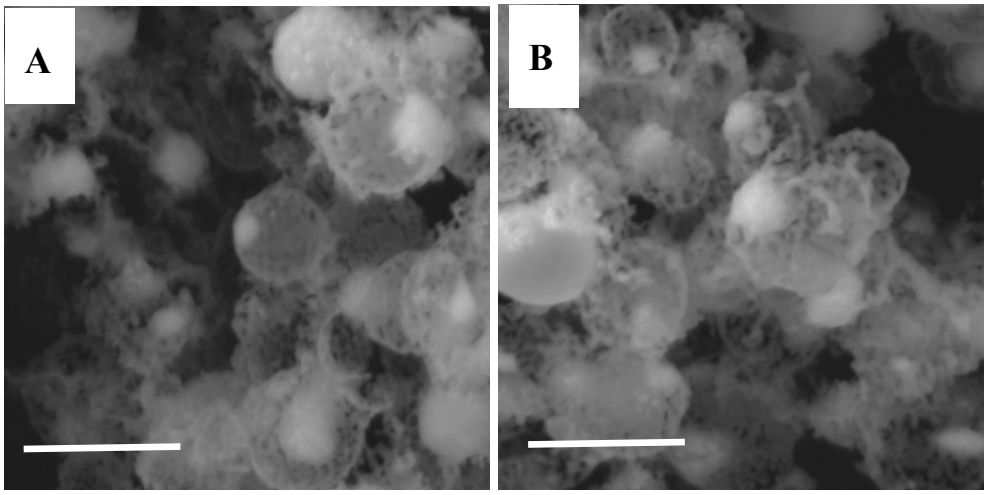


Fig. S4 SEM images of FAHMs before (A) and after (B) recyclable Raman test of 4-ABT and ricin (sunlight for 200 min and water washing for 5 cycles). The scale bar is 5 μm.