

Facile Synthesis of Multibranching Gold Nanostars with Precisely Tunable Sizes for Surface-Enhanced Raman Scattering

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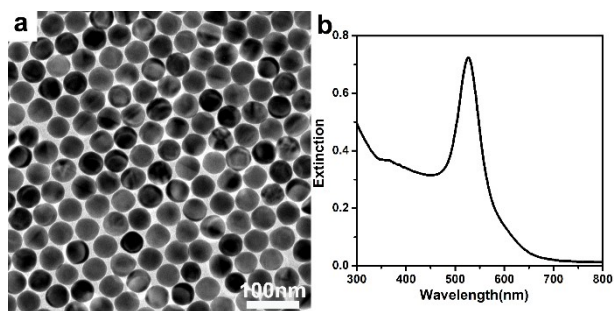


Fig. S1 TEM image (a) and the corresponding UV-vis spectrum (b) of the as-prepared spherical Au NPs.

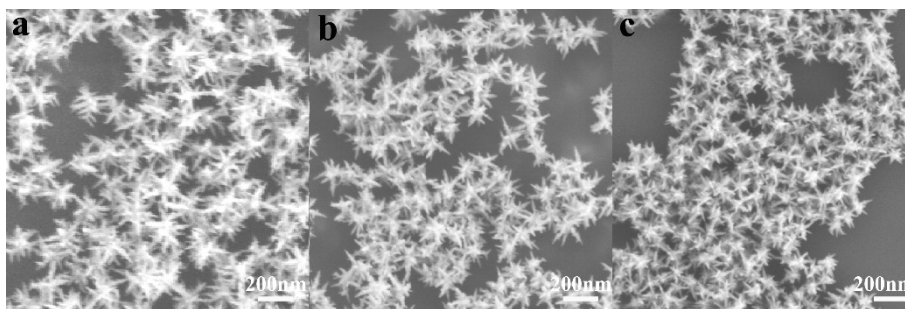


Fig. S2 SEM images (a to c) of Au nanostars synthesized at different volume of 25 nm Au nanosphere solutions: 15 (a), 50 (b), and 100 μL (c). The concentrations of CTAC, HAuCl_4 , AA and cysteine in the growth solution are 15 mM and 0.18 mM, 4.5 mM, and 0.9 μM , respectively.

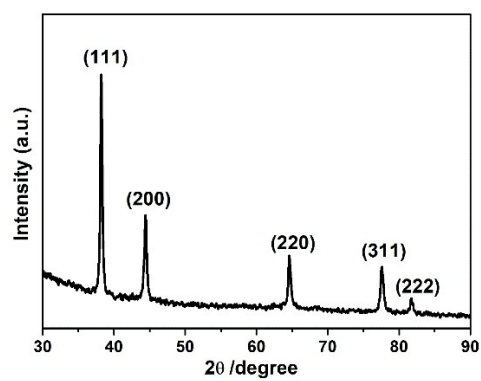


Fig. S3 XRD spectrum of the Au nanostars.

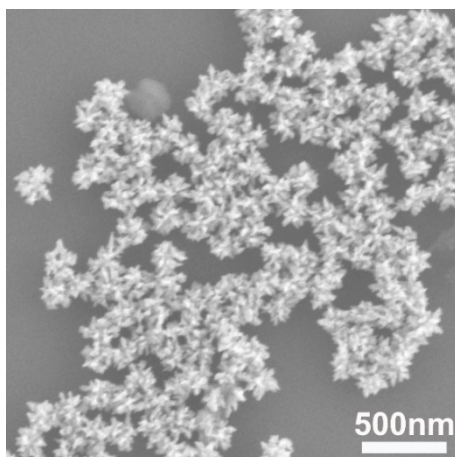


Fig. S4 SEM images of flower-like Au NPs prepared under the same reaction conditions except that CTAC was replaced by CTAB. The optimal concentrations of CTAB, cysteine, HAuCl_4 , and AA in the growth solution are 15 mM, 0.9 μM , 0.18 mM, and 4.5 mM, respectively. The volume of as-prepared seed solutions in the growth solution is 100 μL .

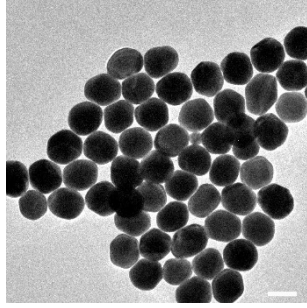


Fig. S5 TEM image of the as-prepared 236 nm Au nanospheres. The scale bar is 200 nm.

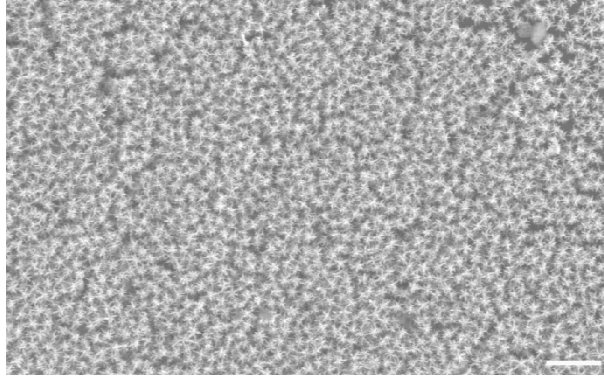


Fig. S6 SEM image of the as-prepared Au nanostars substrate. The scale bar is 1 μM .