

Supplementary Material

Laser irradiation-induced construction of Pt/Ag bimetallic nanourchins with improved electrocatalytic properties

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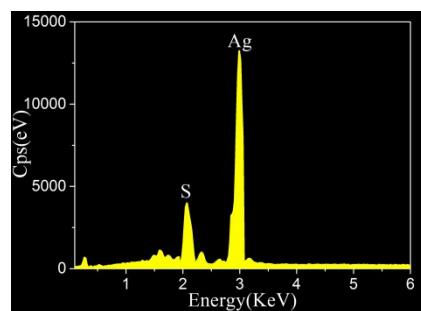


Figure S1. The EDS of the original Ag₂S/Ag nanoseeds.

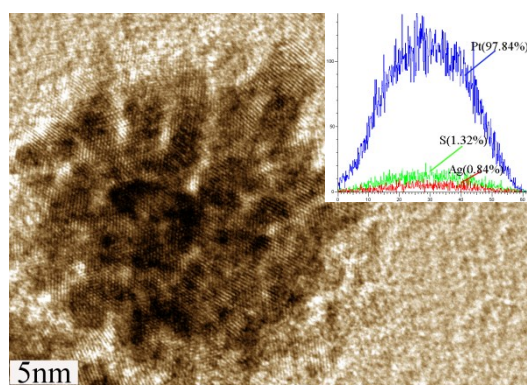


Figure S2. The HRTEM image of intermediate product in the process of fabricating Ag/Pt bimetallic nanourchins and the inset is the cross-sectional compositional line profiles.

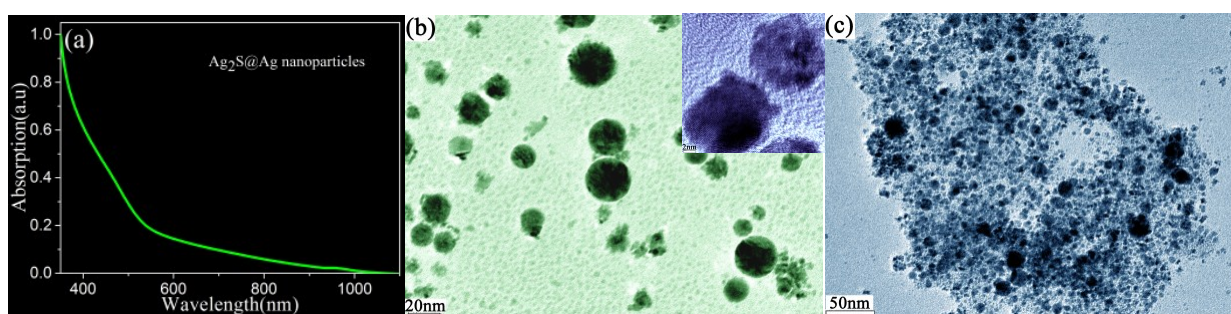


Figure S3. (a) The UV-visible absorption spectra of $\text{Ag}_2\text{S}/\text{Ag}$ nanoparticles by laser ablation of Ag target in TAA solution. (b) TEM image of Pt/Ag nanocomposites fabricated by 1064 nm laser irradiation in solution. (c) TEM image of Pt/Ag nanocomposites fabricated by 532 nm (600 mW) laser irradiation in solution.

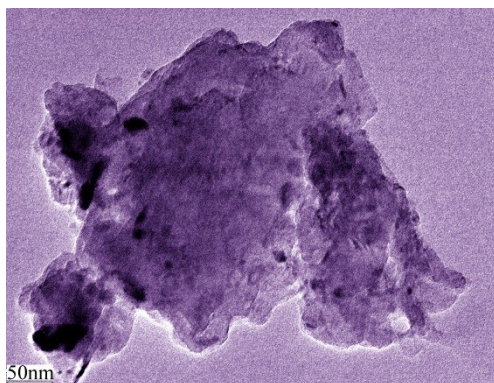


Figure S4. The TEM image of product we obtained without any laser beam irradiation.

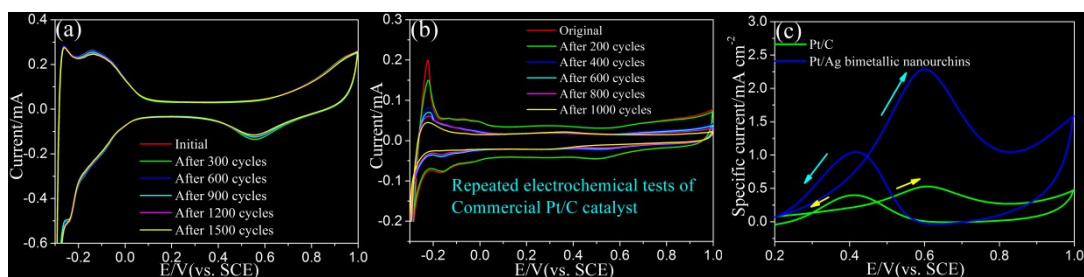


Figure S5. (a) The CV profiles of the Pt/Ag bimetallic nanourchins during the durability tests. (b) The CV profiles of the commercial Pt/C catalyst during the durability tests. (c) ECSA-normalized CV curves for the Pt/Ag bimetallic nanourchins and commercial Pt/C in 0.5 M methanol and 0.5 M H_2SO_4 .

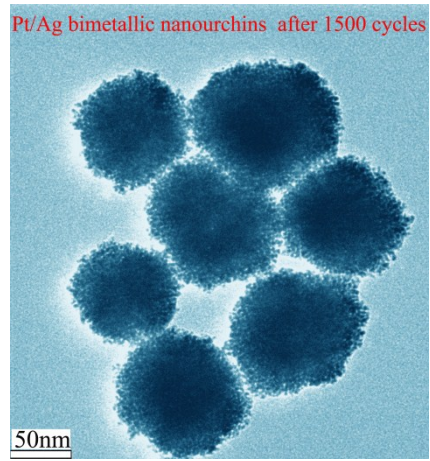


Figure S6. TEM image of the Pt/Ag bimetallic nanourchins after 1500 repeated CV tests.