

Supporting Information for Dealloying Process of Core-shell Au@AuAg Nanorods for Porous Nanorods with Tunable Optical Properties and Enhanced Catalytic Activity

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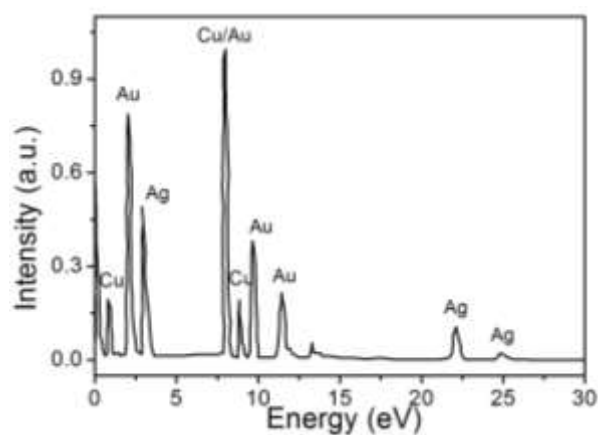


Figure S1 EDS spectrum of the core-shell Au@AuAg nanorods.

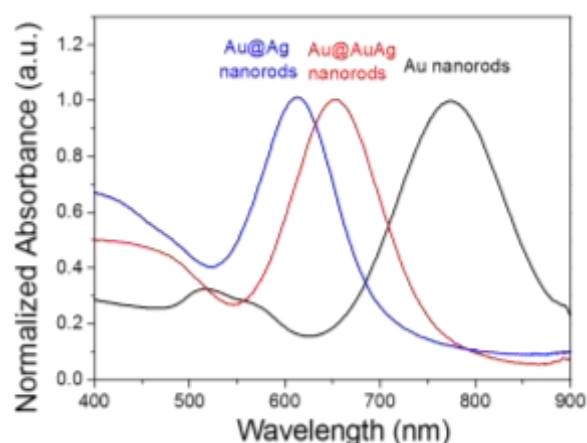


Figure S2. Normalized absorption spectra of the gold nanorods, Au@AuAg nanorods and Au@Ag nanorods.

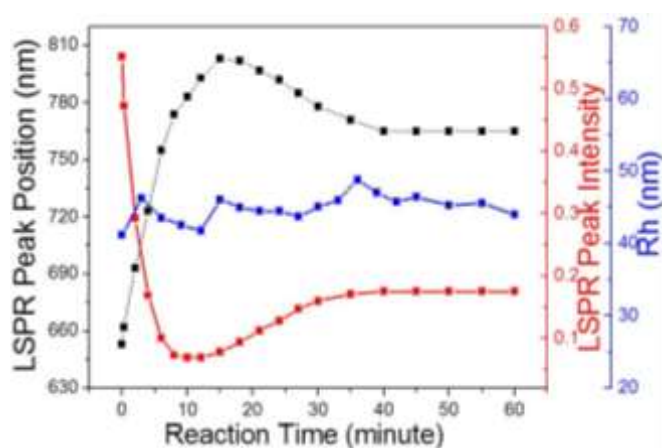


Figure S3 The temporal evolution of the LSPR peak positions (black squares), the peak intensity (red squares) and the average hydrodynamic radius (blue squares) during the reaction.

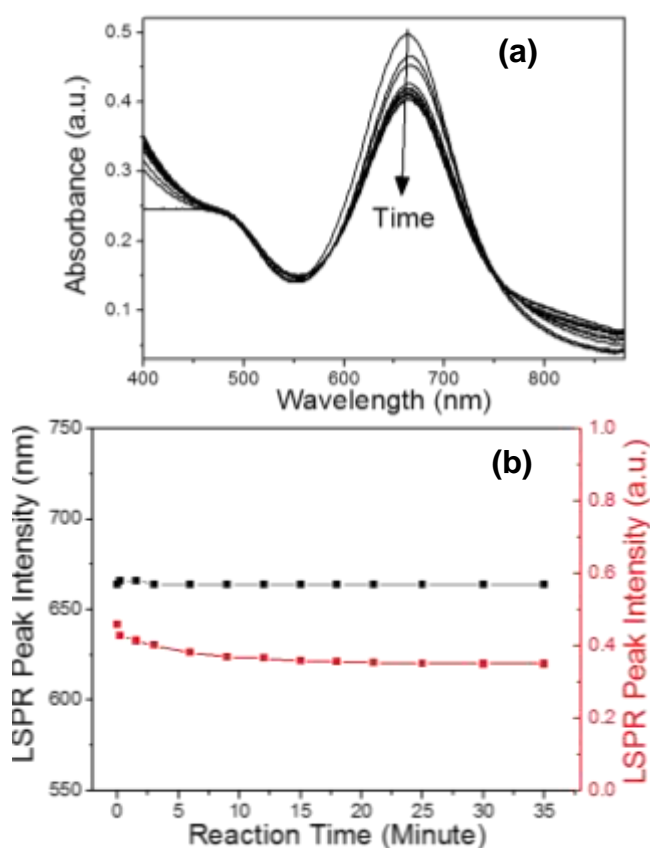


Figure S4 (a) The UV-vis absorption spectra of the solution in which Au@Au_{7.5}Ag_{7.5} core-shell nanorods reacted with 100 μ L of 10 mM Fe(NO₃)₃. The absorption spectra were measured at a regular interval. (b) The temporal evolution of the LSPR (longitudinal surface plasmon resonance) peak positions (black squares) and the peak intensity (red hollow squares) during the reaction.

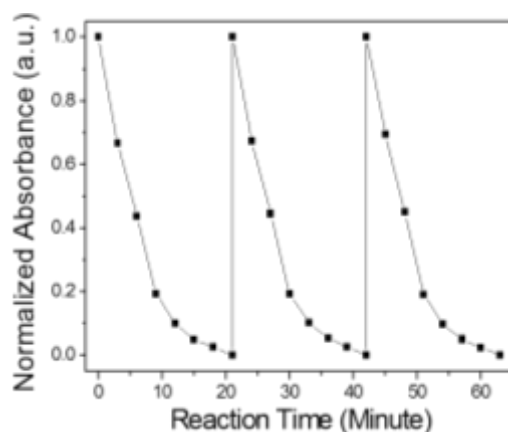


Figure S5 The three-run test of the reduction 4-nitrophenol by using solid Au@porous AuAg nanorods

Table S1. The average length and diameter of the gold nanorods (NRs), the core-shell Au@AuAg nanorods, the porous nanorods, rough nanorods and smooth nanorods obtained from the dealloying process.

	Au nanorods	Core-shell Au@AuAg nanorods	Porous nanorods	Rough nanorods	Smooth nanorods
Length/nm	42.35±4.70	52.91±4.02	52.87±4.73	51.38±4.39	48.51±3.83
Diameter/nm	13.51±1.16	21.13±2.38	21.05±1.48	20.55±1.86	16.41±1.60

Table S2. The molar ratio of Ag/Au from the EDS spectra of the core-shell Au@AuAg nanorods, the porous nanorods, rough nanorods and smooth nanorods obtained from the dealloying process.

	Core-shell Au@AuAg nanorods	Porous nanorods	Rough nanorods	Final nanorods
Ag/Au	48:52	33:67	16.7:83.3	0.7:99.3