

Supporting information

Self-assembly Enabling Strawberry-like Organic-Inorganic Hybrid Particles Clusters with Directionally Distributed Bimetal and Facile Transformation of Core & Corona

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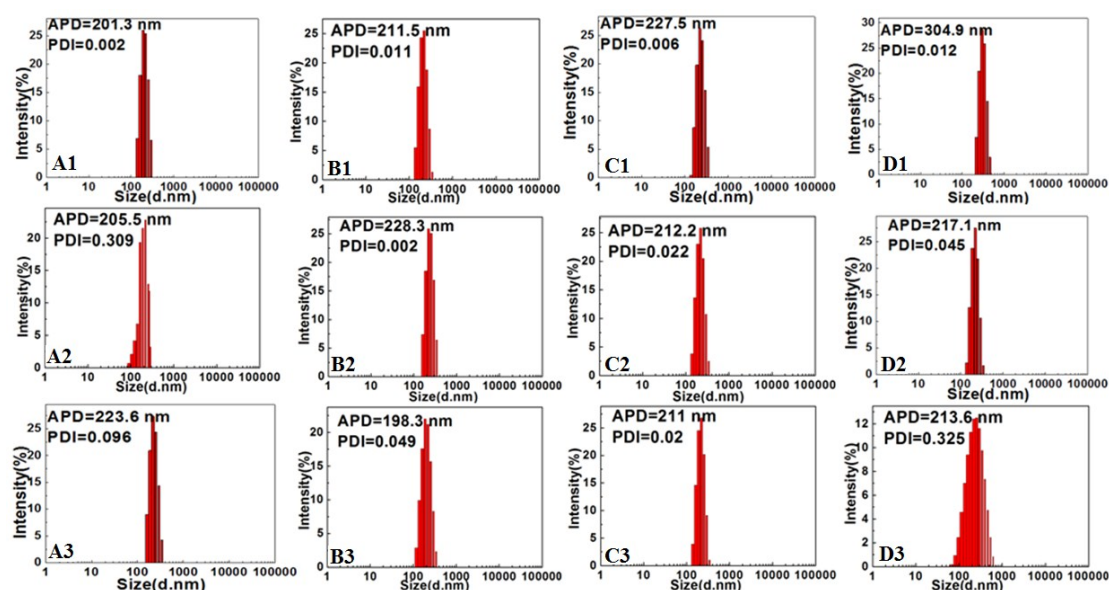


Figure S1 Average sizes and size distributions of P(St-co-GMA-co-VBA) copolymer particles

A1 : P(S_{0.1}G_{0.4}V_{0.05}), B1 : P(S_{0.1}G_{0.4}V_{0.10}), C1 : P(S_{0.1}G_{0.4}V_{0.15}), D1 : P(S_{0.1}G_{0.4}V_{0.20});
A2 : P(S_{0.6}G_{0.4}V_{0.05}), B2 : P(S_{0.6}G_{0.4}V_{0.10}), C2 : P(S_{0.6}G_{0.4}V_{0.15}), D2 : P(S_{0.6}G_{0.4}V_{0.20});
A3 : P(S_{1.0}G_{0.4}V_{0.05}), B3 : P(S_{1.0}G_{0.4}V_{0.10}), C3 : P(S_{1.0}G_{0.4}V_{0.15}), D3 : P(S_{1.0}G_{0.4}V_{0.20}).

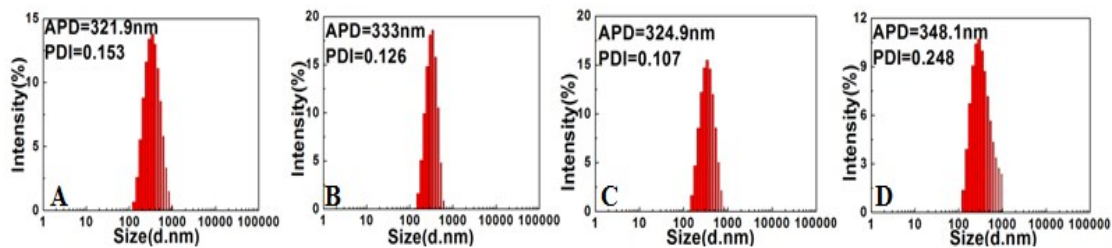


Figure S2 Average sizes and size distributions of $P(S_xG_yV_z)@SiO_2&Au$ and $P(S_xG_yV_z)&Ag@SiO_2&Au$ particles ($x=0.6, y=0.4, z=0.05/0.1$). A: $P(S_{0.6}G_{0.4}V_{0.05})@SiO_2&Au$, B: $P(S_{0.6}G_{0.4}V_{0.05})&Ag@SiO_2&Au$, C: $P(S_{0.6}G_{0.4}V_{0.1})@SiO_2&Au$, D: $P(S_{0.6}G_{0.4}V_{0.1})&Ag@SiO_2&Au$.

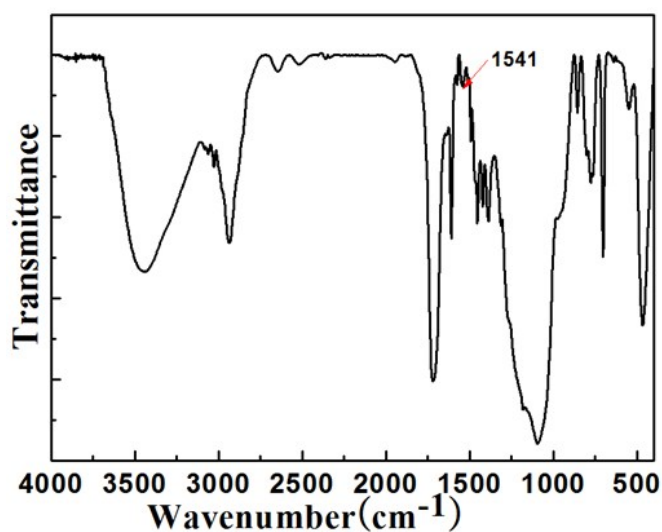
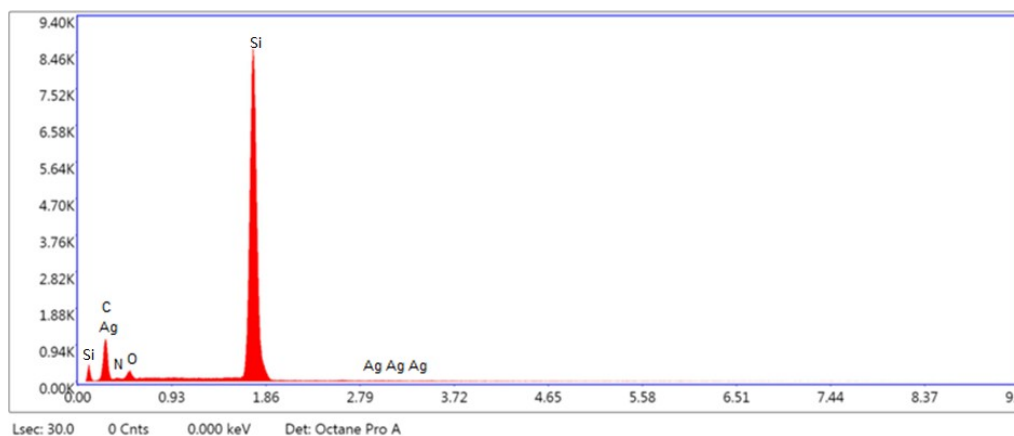


Figure S3 FTIR spectrum of the $P(S_{0.6}G_{0.4}V_{0.1})@SiO_2&Au$ NPs

EDS Spot 1



EDS Spot 2

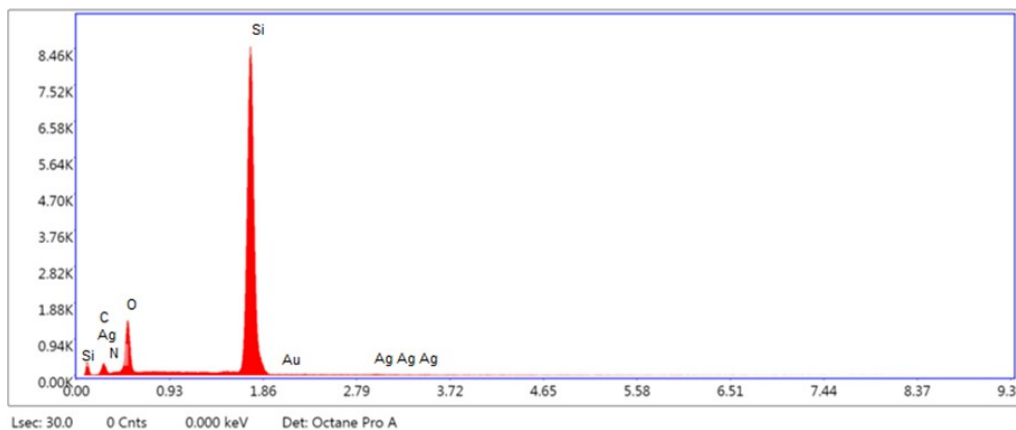


Figure S4 EDS spectra of corresponding spot 1 and spot 2 of $P(S_{0.6}G_{0.4}V_{0.1})@Ag@SiO_2&Au$ NPs

Table S1 Apparent rate constants of three catalysts with different volumes of catalyst solution

Catalyst type	Addition volume of catalyst solution (mL) **	K (min ⁻¹)
$SiO_2&Au$ (Au wt%=1.61%)	0.5	0.09
	1.0	0.15
	1.5	0.19
	2.0	0.36
	2.5	0.59
$P(S_{0.6}G_{0.4}V_{0.10})@SiO_2&Au$ (Au wt%=0.59%)	0.5	0.18
	1.0	0.24
	1.5	0.30
	2.0	0.39
$P(S_{0.6}G_{0.4}V_{0.10})@Ag@SiO_2&Au$ (Au wt%=0.23%, Ag wt%=2.37%)	2.5	0.68
	0.5	0.29
	1.0	0.49
	1.5	0.50
	2.0	1.97
	2.5	2.20

**Reaction conditions: Using 10 mL of RhB (2×10^{-5} mol/L), 0.5 mL of $NaBH_4$ (1.2 mol/L) solutions and keeping the same Au concentration through adding different volume water in the varying catalyst dispersions.