Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Temporal-spatially transformed synthesis and formation mechanism of gold bellflowers

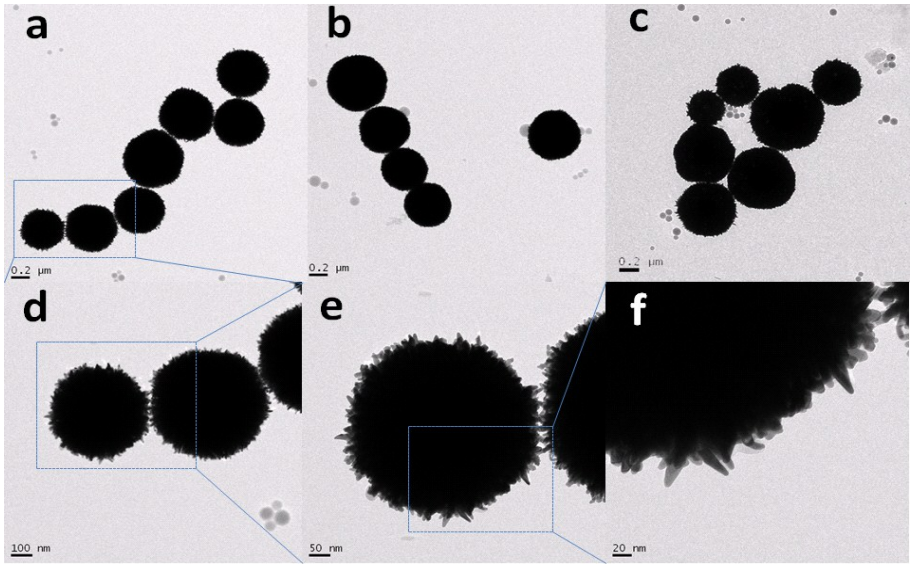

Fig. S1 TEM images of GNUs obtained by the monophasic synthesis method with sonication after adding (a) 3 μL, (b) 7.5 μL, and (c) 9 μL of *o*-phenetidine into 5 mL 0.8 mM $HAuCl_4$ aqueous solution. (d-f) TEM images of high magnification.

.

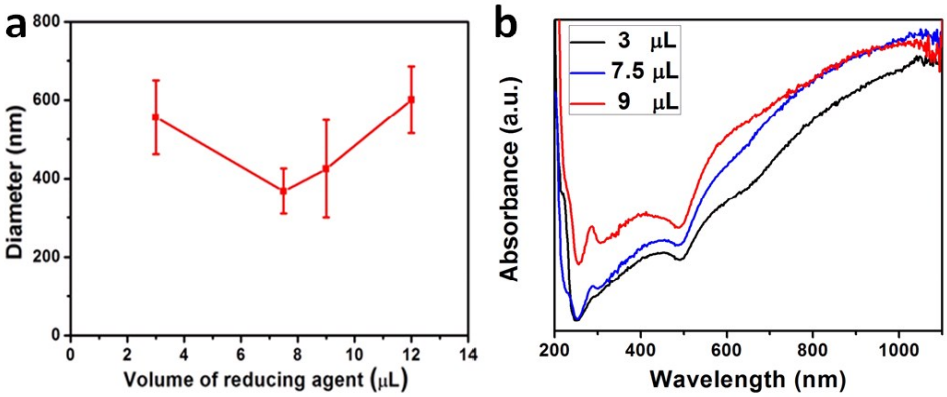

Fig. S2 (a) Diameter change and (b) UV-vis-NIR absorbance spectra of GNUs prepared by using different volumes of *o*-phenetidine.

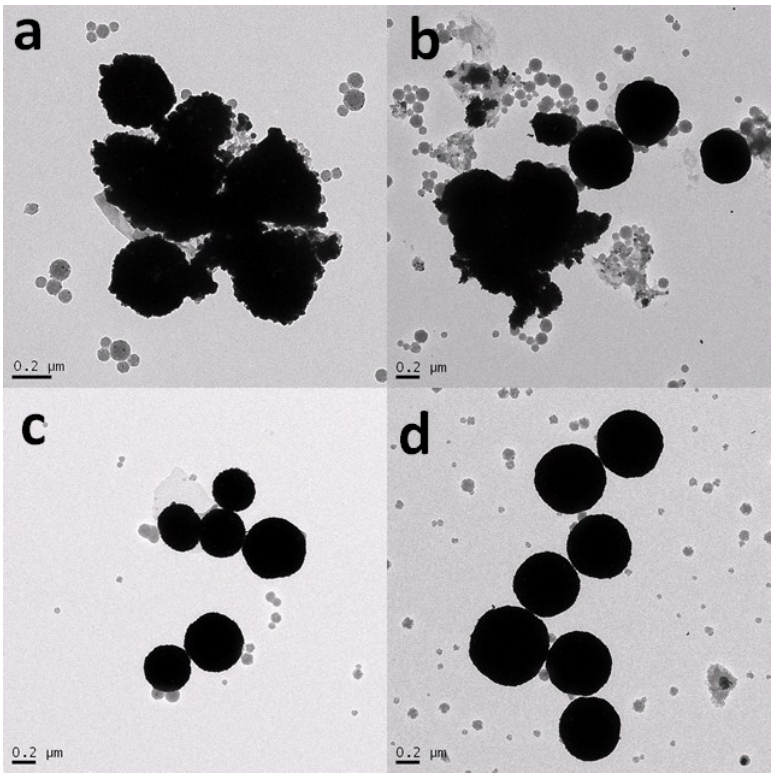

Fig. S3 TEM images of GMPs obtained by biphasic synthesis method under vigorously stirring. The 0.5 mL (a), 1 mL (b), 3 mL (c), and 4 mL (d) of 20 mM *o*-phenetidine in hexane were gently added on the top of 5 mL of $HAuCl_4$ aqueous solutions (0.8 mM) prior to stirring.

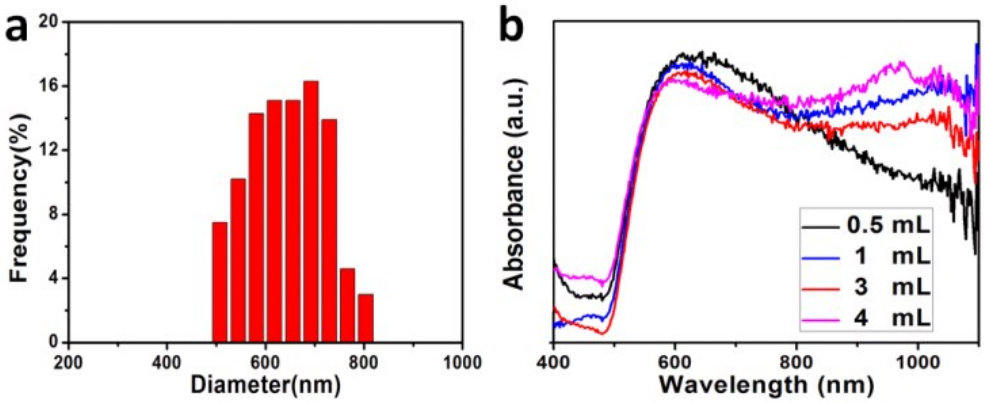

Fig. S4 (a) Diameter and (b) UV-vis-NIR absorbance spectra of GMPs obtained by biphasic synthesis method under vigorously stirring.

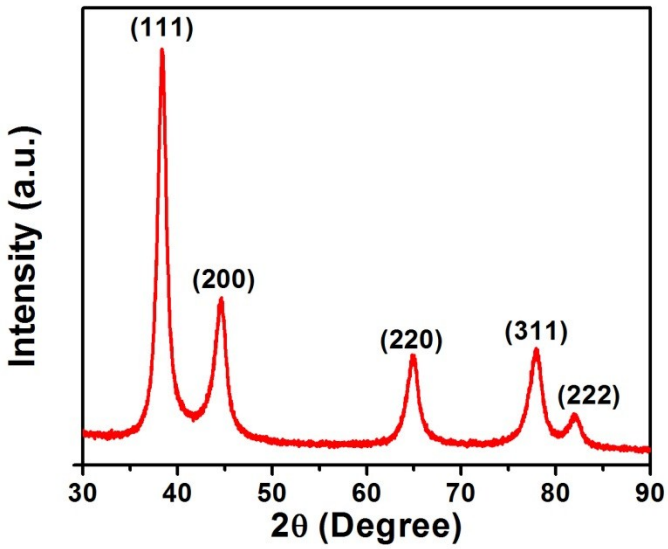

Fig. S5 XRD pattern of GNUs.

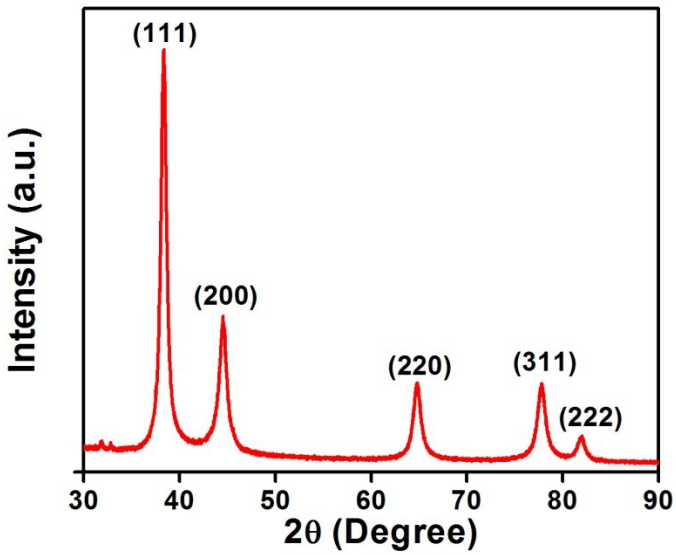

Fig. S6 XRD pattern of GMPs.

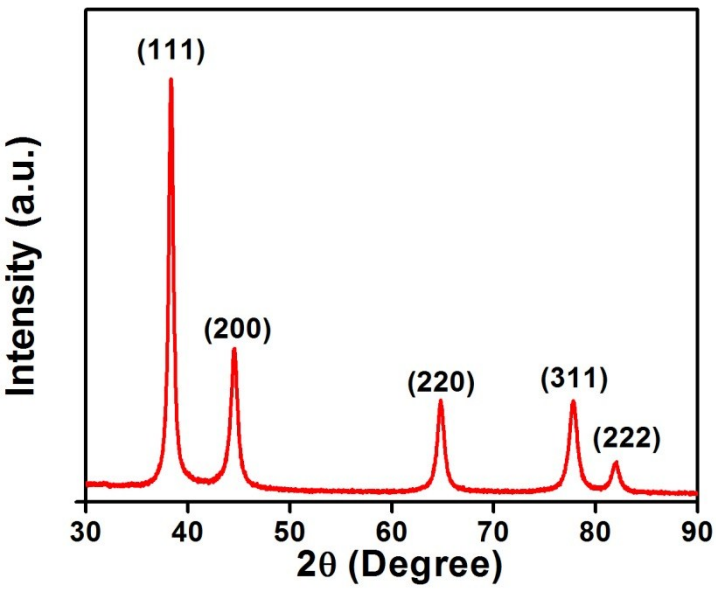

Fig. S7 XRD pattern of GBFs.

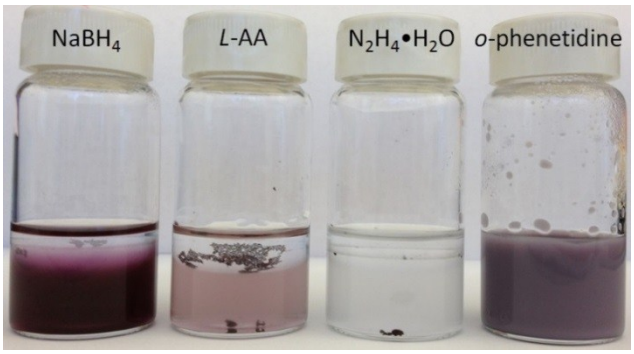

Fig. S8 Photographs of two-phase systems using different reduction agents under sonication.