Electronic Supplementary Material (ESI) for Nanoscale
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Microorganism-mediated synthesis of chemically difficult-to-synthesize Au nanohorns with excellent optical properties in the presence of hexadecyltrimethylammonium chloride

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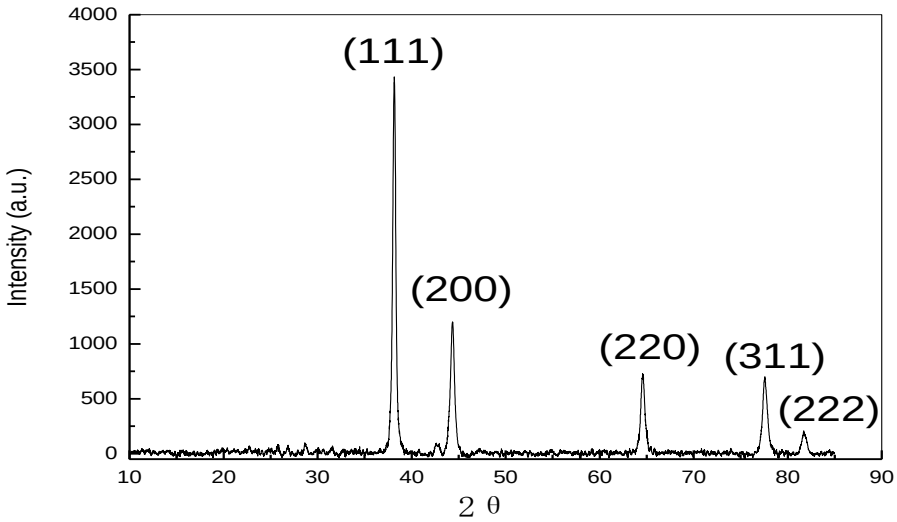

Figure S1. XRD pattern of AuNHs synthesized through the reduction of aqueous $HAuCl_4$ (0.25 mM) with AA (0.5 mM) in the presence of the dried PPCs (0.005 g) and CTAC concentration of 5.0 mM.

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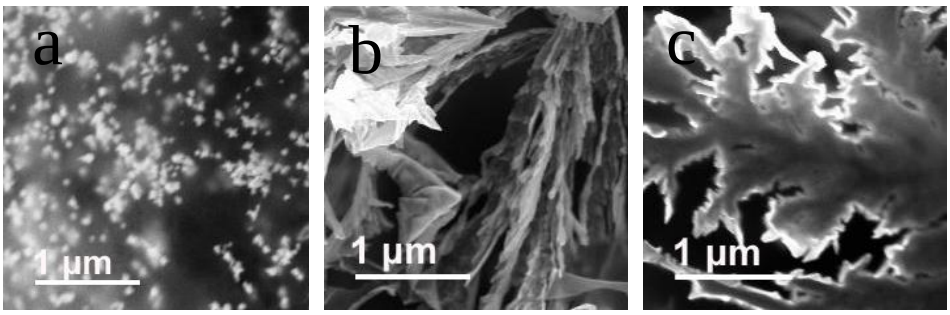

Figure S2. SEM images of Au nanostructures synthesized through the reduction of aqueous $HAuCl_4$ (0.25 mM) with AA (0.5 mM) at 30 ^oC in the presence of the dried PPCs (0.005 g) using different CTAC concentrations: (a) 0.002, (b) 0.01, and (c) 0.05 M.

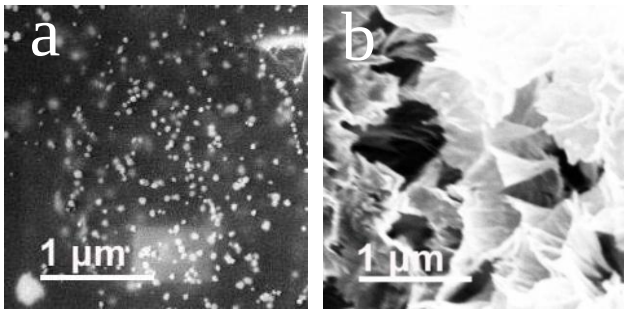

Figure S3. SEM images of Au nanostructures synthesized through the reduction of aqueous $HAuCl_4$ (0.25 mM) at different concentration of AA: (a) 0.25 and (b) 1.0 mM in the presence of the dried PPCs (0.005 g) and CTAC (5.0 mM) at 30 ^oC.

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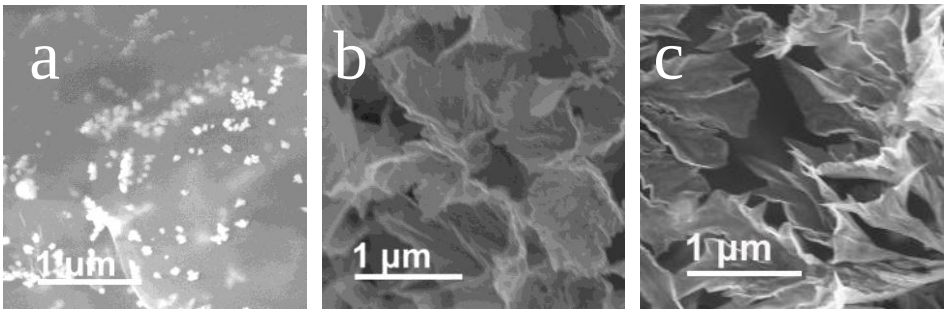

Figure S4. SEM images of Au nanostructures synthesized through the reduction of aqueous $HAuCl_4$ at (a) 0.5, (b) 0.125, and (c) 0.05mM with AA (0.5 mM) and CTAC (5.0 mM) in the presence of dried PPCs (0.005g) at 30 ^{o}C.

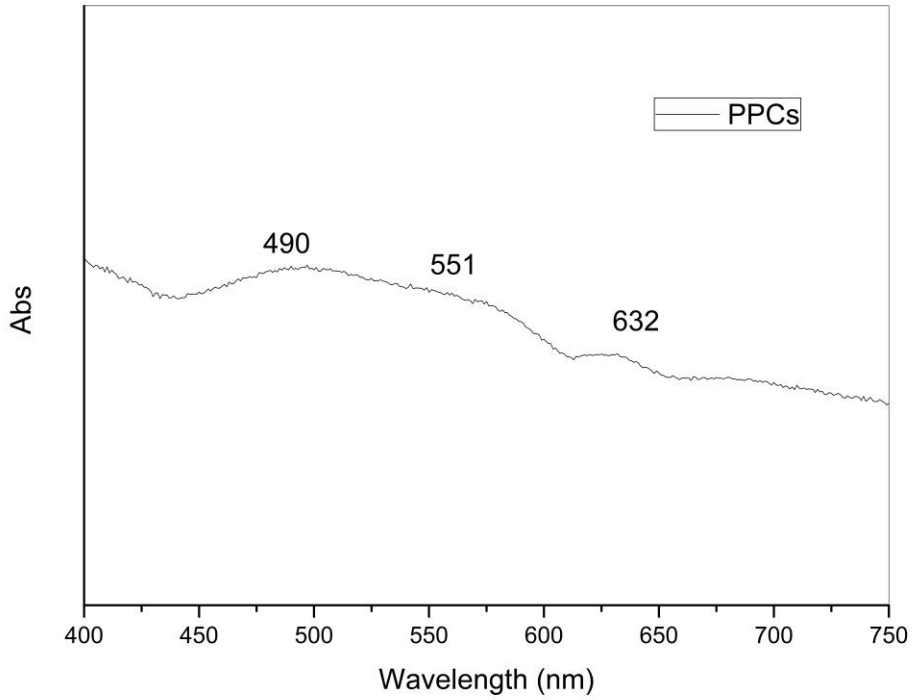

Figure S5. UV-vis absorption spectrum of the PPCs.

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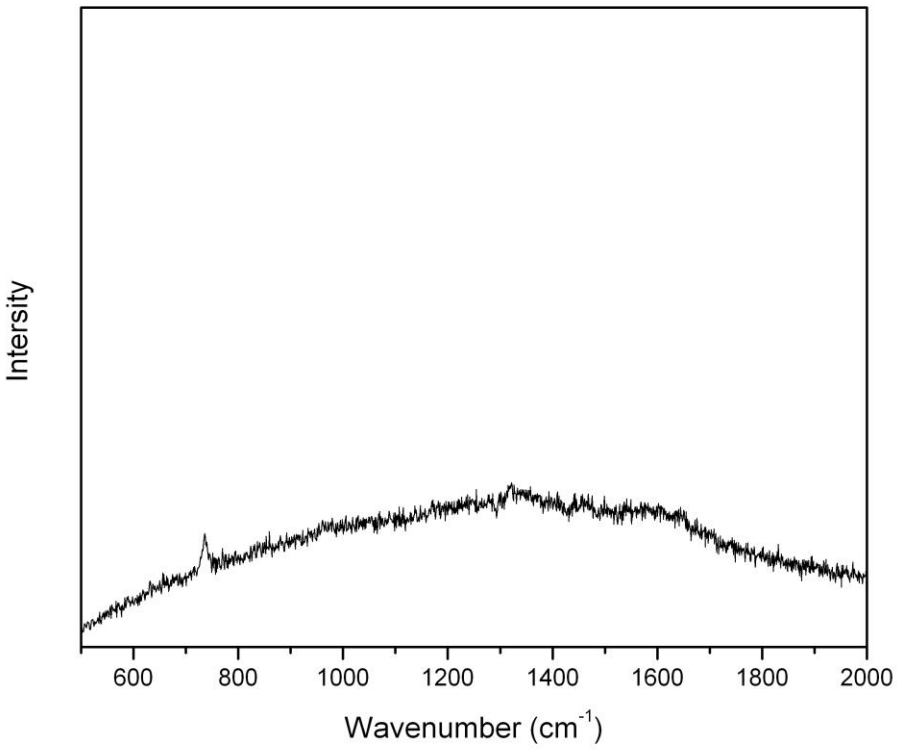

Figure S6. Raman spectrum of pure PPCs in the presence of 10^{-9} M Rhodamine 6G..

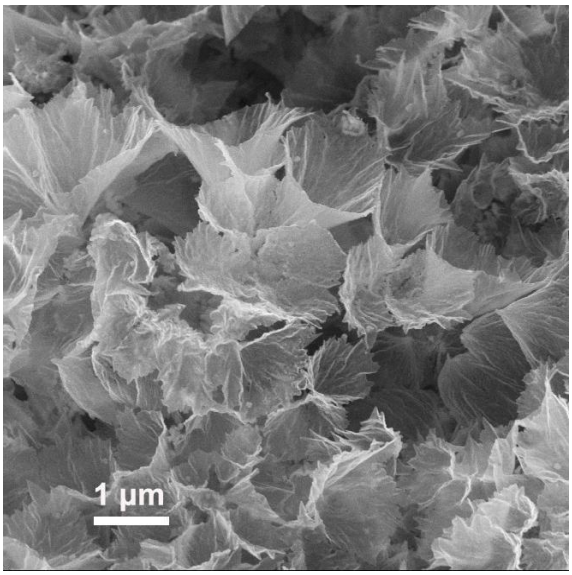

Figure S7. AuNHs synthesized after more than one month of their preparation.