

Electronic Supplementary Information for

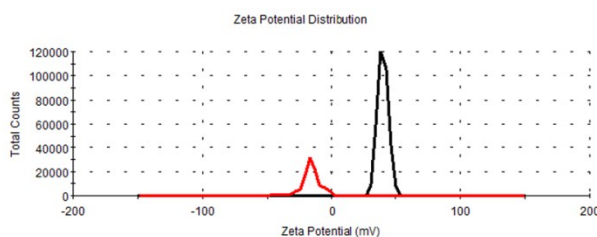
## High-Yield Colloidal Synthesis of Monometallic Au Nanorod-Au Nanoparticle Dimers and Their Application in SERS

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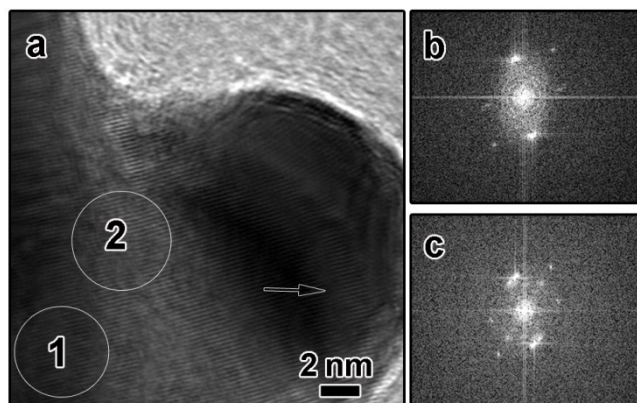
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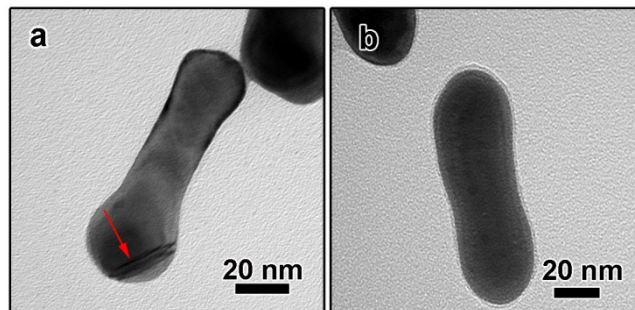
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**Figure S1.** Zeta potential of CTAB-capped AuNRs (black line) and after treated with PSS (red line).



**Figure S2.** (a) HR-TEM image of the intermediate obtained after reacted for 15 min. The black arrow showing the stacking faults. (b) and (c) are FFT diffractions corresponding to the area marked as 1 and 2, respectively, in (a).



**Figure S3.** TEM image of Au nanostructures after seeded growth treated with different concentration of PSS: (a) 0 mg/mL “dog-bone” shape, (b) 3 mg/mL, peanut-like shape. The red arrow in (a) showing the presence of stacking faults at the newly grown layer.