

## Electronic Supplementary Information

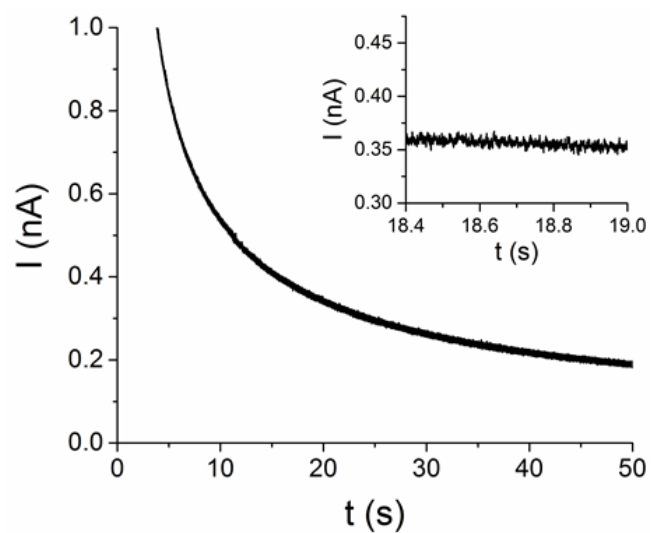
# Capping agent promoted oxidation of gold nanoparticles: Cetyl trimethylammonium bromide

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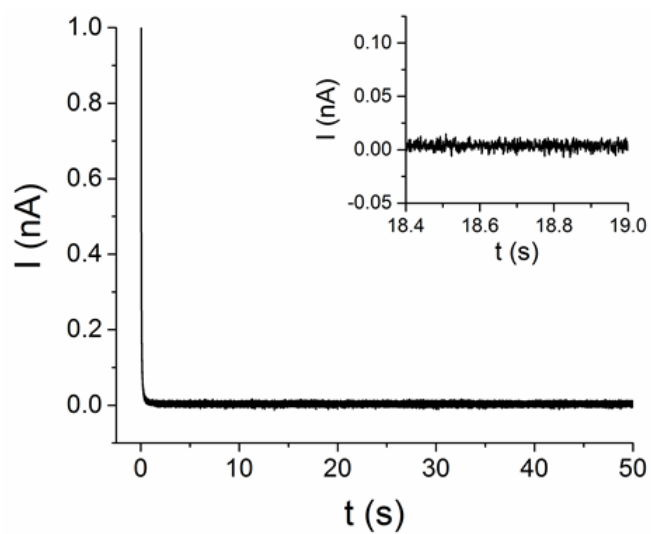
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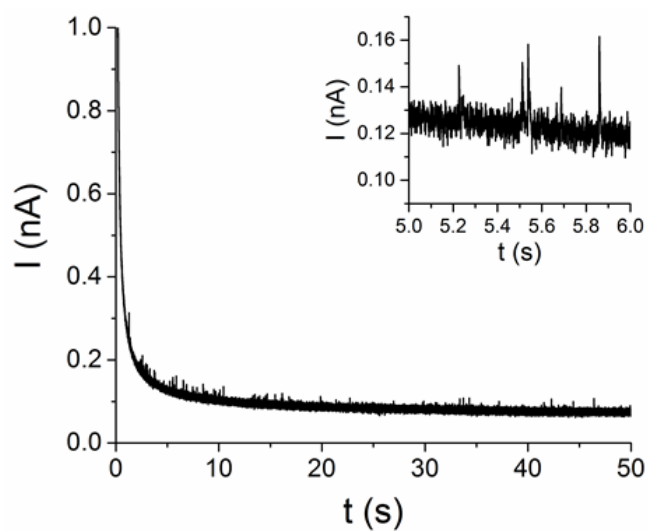
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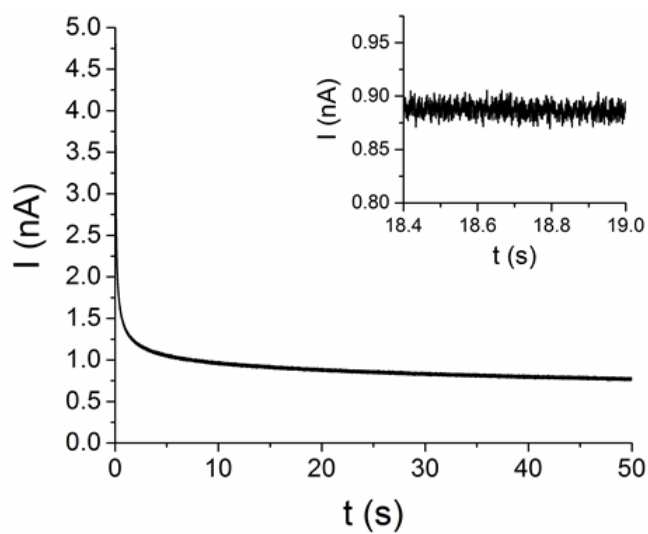
**Figure S1.** Chronoamperogram recorded at 0.7 V vs MSE using a carbon microcylinder electrode immersed in a solution of 0.1 M  $\text{HNO}_3$ .



**Figure S2.** Chronoamperogram recorded at 0.4 V vs MSE using a carbon microcylinder electrode immersed in a solution of 0.1 M  $\text{HNO}_3$  with 1 pM CTAB-capped gold nanoparticles.



**Figure S3.** Chronoamperogram recorded at 0.7 V vs MSE using a carbon microcylinder electrode immersed in a solution of 0.1 M  $\text{HNO}_3$  with 1 pM CTAB-capped gold nanoparticles.



**Figure S4.** Chronoamperogram recorded at 0.7 V vs MSE using a carbon microcylinder electrode immersed in a solution of 0.1 M  $\text{HNO}_3$  with 0.15 mM CTAB.