Supporting Information

Synergistic effect of gold nanoparticles and amine functionalized cobalt porphyrin on electrochemical oxidation of hydrazine

Palanisamy Muthukumar and S. Abraham John*

Centre for Nanoscience and Nanotechnology Department of Chemistry, Gandhigram Rural Institute Gandhigram-624 302, Dindigul, India

^{*}Corresponding author: Tel: +91 451 245 2371 ; Fax : + 91 451 245 3031

E-mail : abrajohn@yahoo.co.in



Fig. S1 Absorption spectrum of colloidal cit-AuNPs.



Fig. S2 TEM image obtained for colloidal cit-AuNPs.



Fig. S3 CVs obtained for (a) bare GCE, (b) GCE/Co(II)MTpAP and (c) GCE/Co(II)MTpAP/cit-AuNPs in 0.1 M H₂SO₄ at a scan rate of 0.1 V s⁻¹.



Fig. S4 Absorption spectrum of Co(II)MTpAP in DMF.



Fig. S5 XRD obtained for ITO/Co(II)MT*p*AP/cit-AuNPs.



Fig. S6 CVs obtained for 0.5 mM hydrazine in pH (a) 2, (b) 4, (c) 7, (d) 9 and (e) 12 at GCE/Co(II)MTpAP/cit-AuNPs at a scan rate of 0.05 V s⁻¹.

Table S1. Charge consumed for Au oxide reduction at different immersion time intervals

Immersion	Au oxide reduction
time (h)	charge (µC)
1	10
3	15
6	22
8	20