

## Enhanced Electrochemical Response of Modified Glassy Carbon Electrode by Poly(2-vinylpyridine-*b*-methyl methacrylate) Conjugated Gold Nanoparticles for Detection of Nicotine

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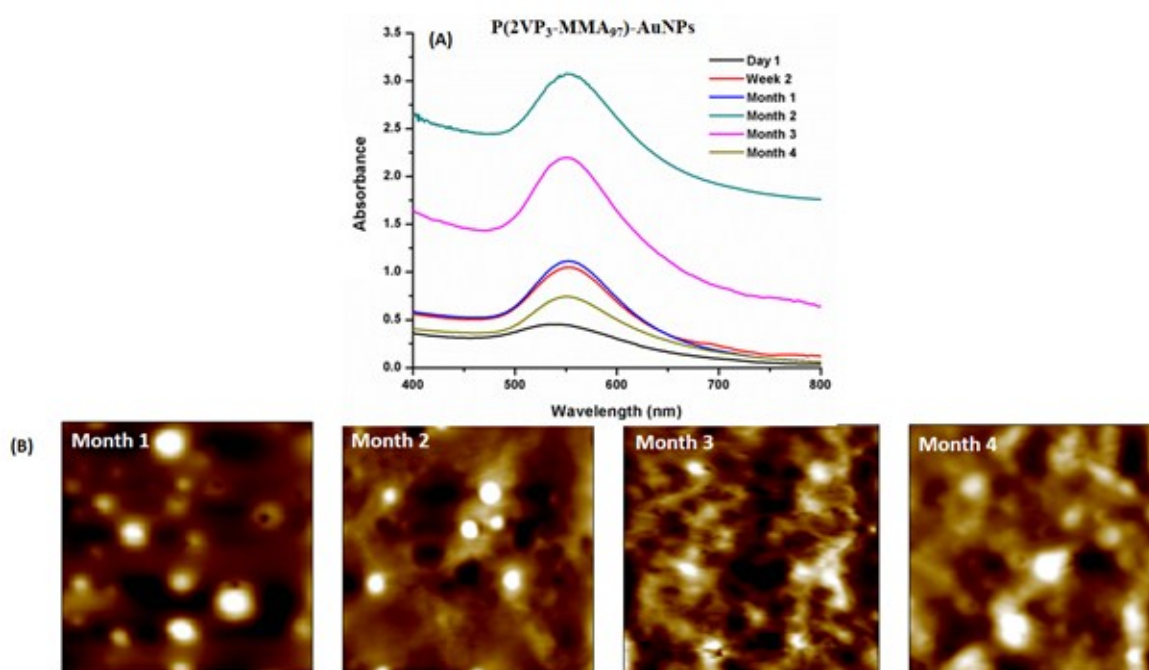


Figure S1. Time stability of P(2VP<sub>3</sub>-MMA<sub>97</sub>)-AuNPs (A) UV-vis spectroscopy (B) AFM images having 2x2 μm dimension.

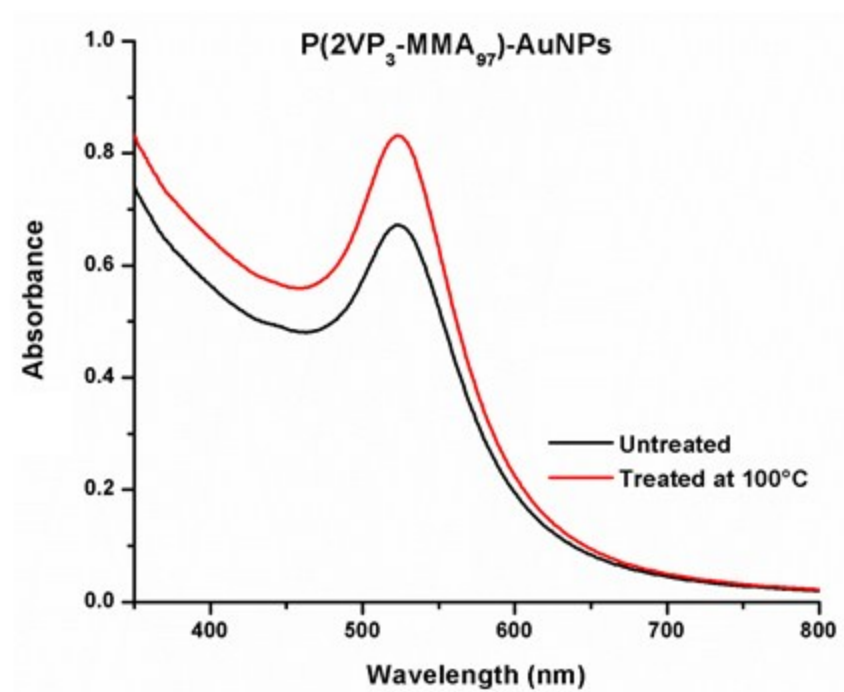


Figure S2. Enhancement in SPR band of P(2VP<sub>3</sub>-MMA<sub>97</sub>)-AuNPs after temperature treatment.

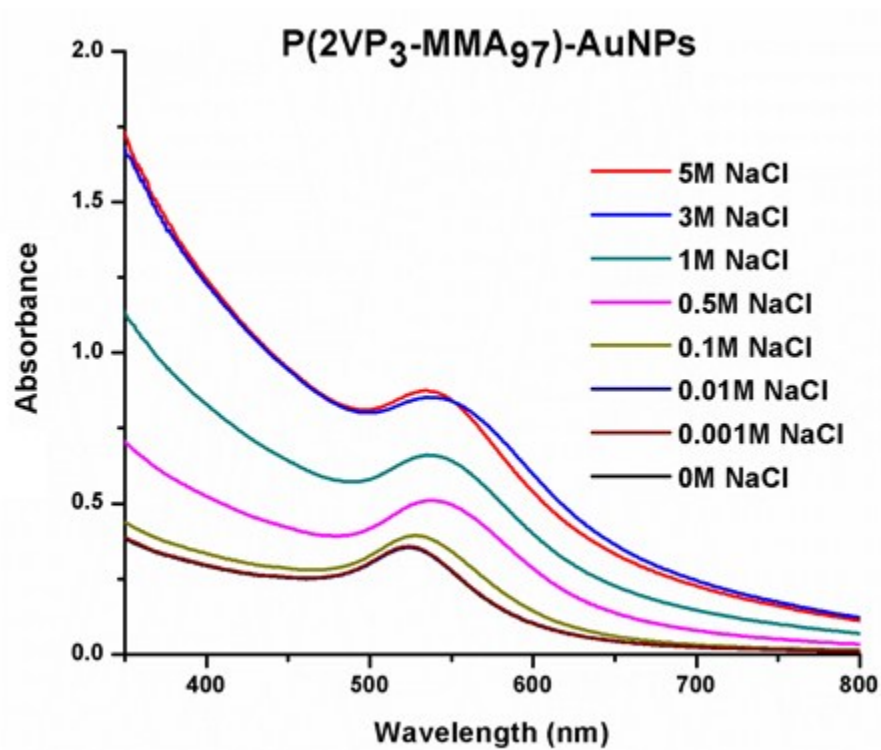


Figure S3. Effect of electrolyte concentration on the stability of P(2VP<sub>3</sub>-MMA<sub>97</sub>)-AuNPs.

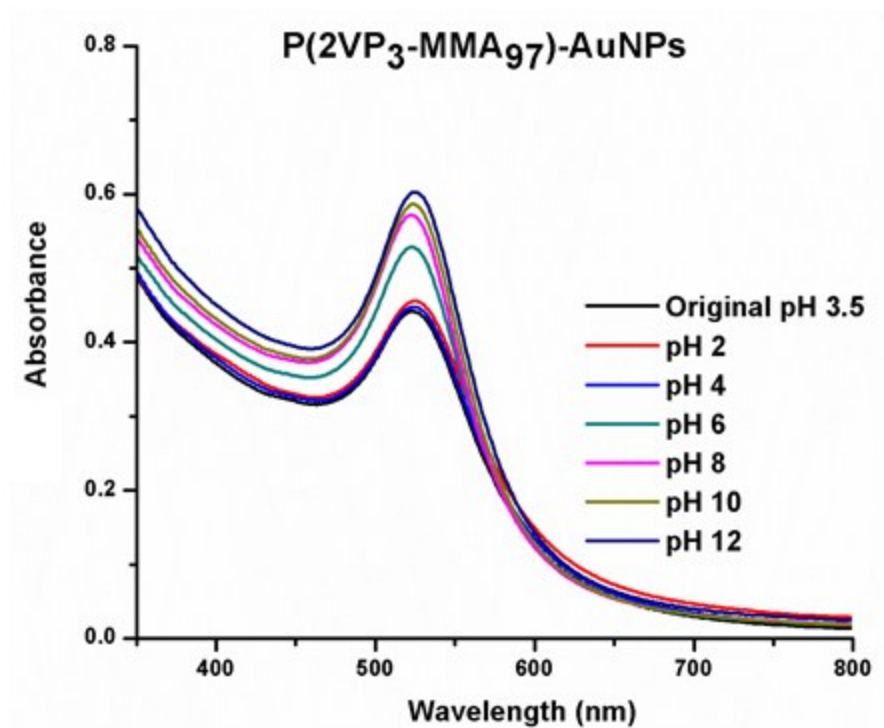


Figure S4. pH effect on stability of the P(2VP<sub>3</sub>-MMA<sub>97</sub>)-AuNPs.

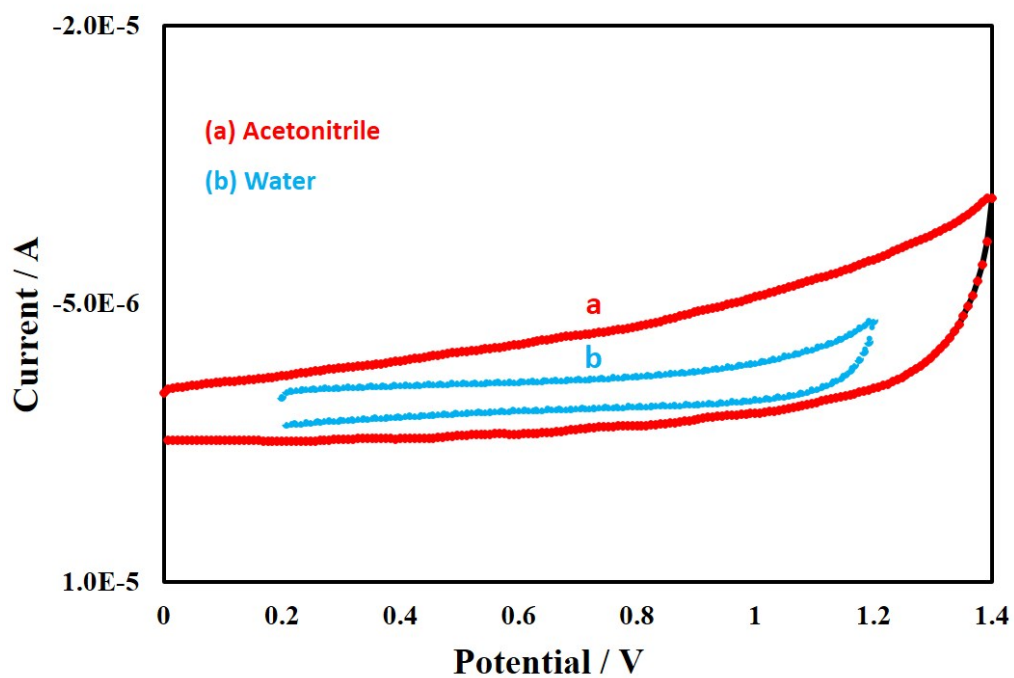
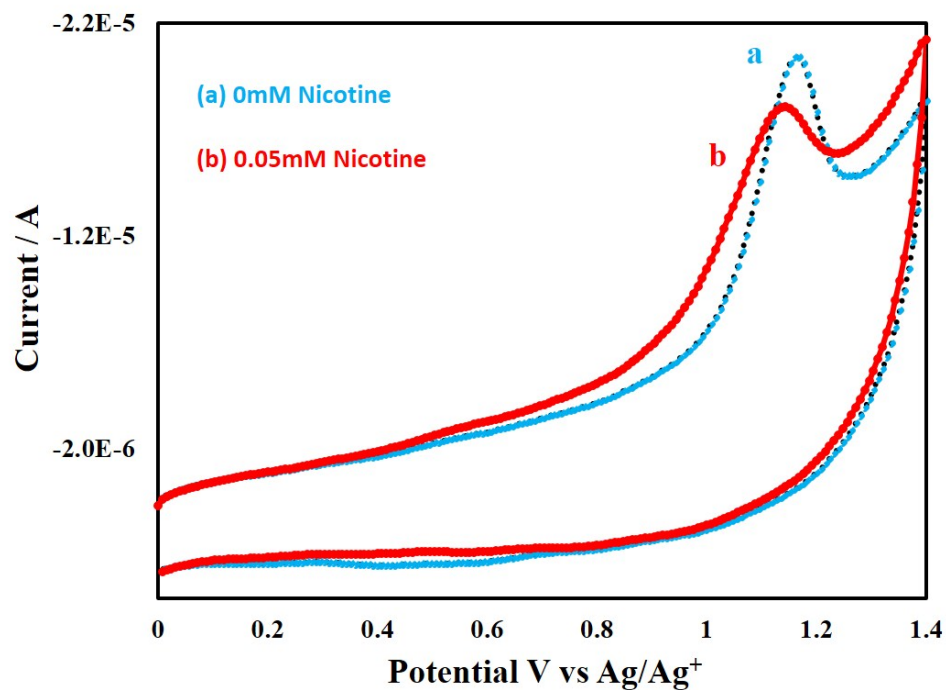
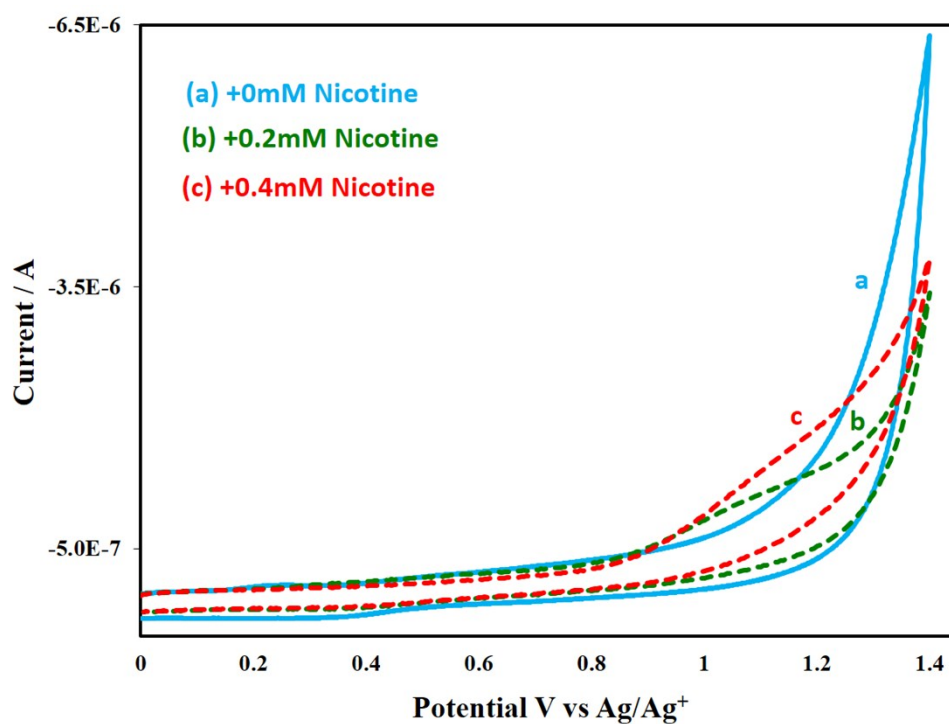


Figure S5. Cyclic voltammograms in the absence of nicotine on bare GCE while using (a) acetonitrile (b) water as a solvent.



**Figure S6.** A comparative view of cyclic voltammograms (a) absence (0 mM) and (b) presence (0.05 mM) of nicotine on P(2VP<sub>3</sub>-MMA<sub>97</sub>)-AuNPs-GCE in acetonitrile.



**Figure S7.** An overlay of (a) absence, (b) and (c) presence of nicotine on P(2VP<sub>3</sub>-MMA<sub>97</sub>)-GCE in acetonitrile at scan rate of 0.1 V.s<sup>-1</sup>.