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

Sana Rahim, Asma Rauf, Saba Rauf, Muhammad Raza Shah, Muhammad Imran Malik*

H.E.J. Research Institute of Chemistry, International Centre for Chemical and Biological Sciences (ICCBS), University of Karachi, Karachi 75270, Pakistan

*E-mail: mimran.malik@iccs.edu

Figure S1. Time stability of P(2VP3-MMA97)-AuNPs (A) UV−vis spectroscopy (B) AFM images having 2x2 µm dimension.
Figure S2. Enhancement in SPR band of P(2VP₃-MMA₉₇)-AuNPs after temperature treatment.

Figure S3. Effect of electrolyte concentration on the stability of P(2VP₃-MMA₉₇)-AuNPs.
Figure S4. pH effect on stability of the P(2VP$_3$-MMA$_{97}$)-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$_3$-MMA$_{97}$)-AuNPs-GCE in acetonitrile.

Figure S7. An overlay of (a) absence, (b) and (c) presence of nicotine on P(2VP$_3$-MMA$_{97}$)-GCE in acetonitrile at scan rate of 0.1V.s$^{-1}$. 