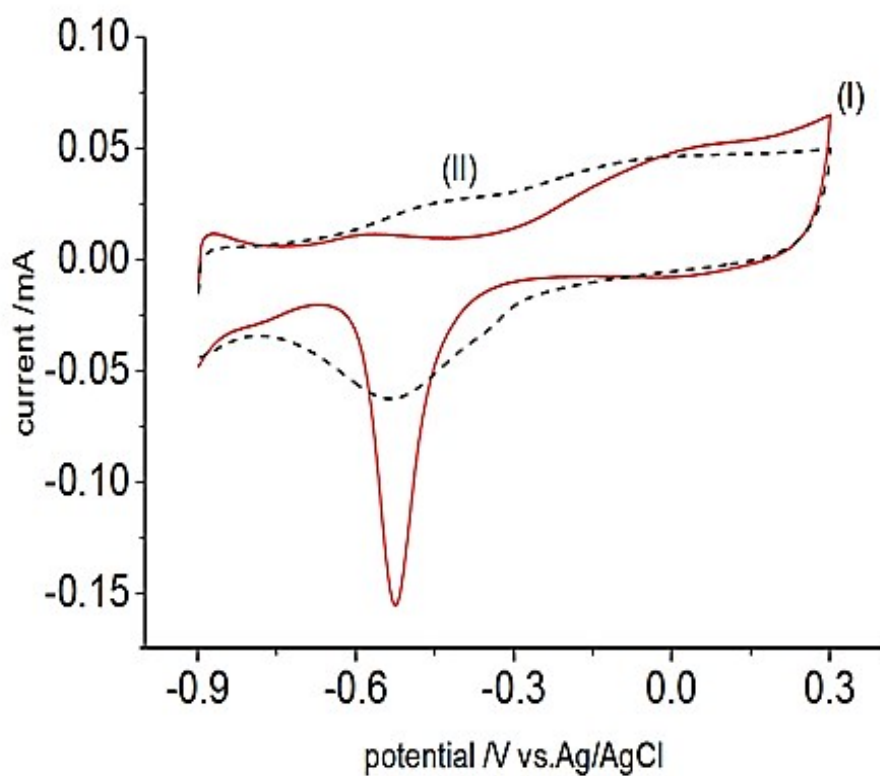
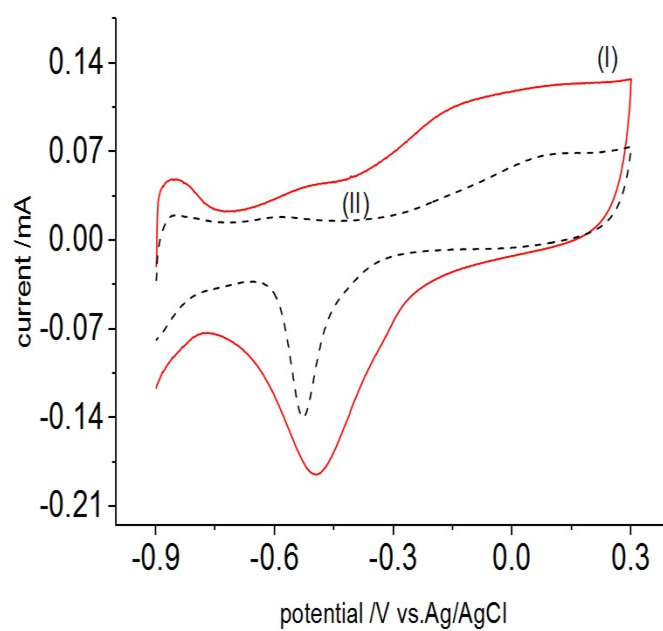


### Supporting Information

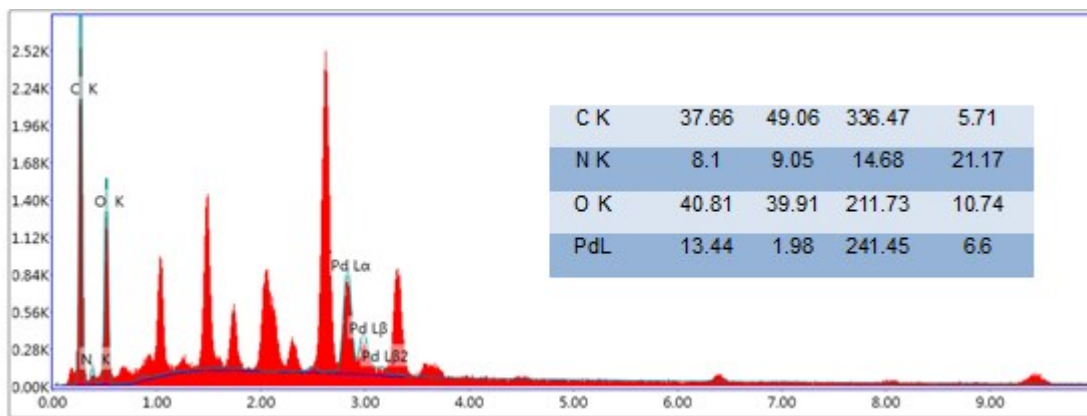


(A)

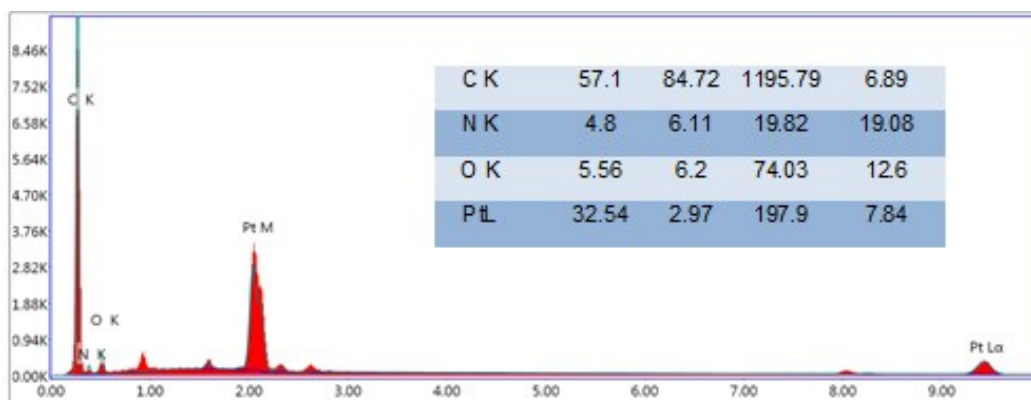


**(B)**

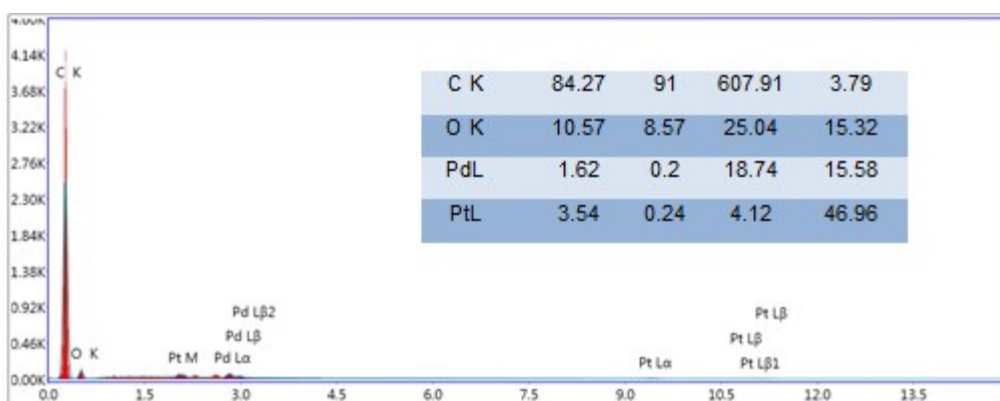
**Fig. S1** Cyclic Voltammograms of (A) single metal layer (I) Pd/p1,2-DAAQ/GC and (II) Pt/p1,2-DAAQ/GC and (B) bimetallic layer (I) Pt/Pd/p1,2-DAAQ/GC and (II) Pd/Pt/p1,2-DAAQ/GC in 1.0M NaOH at scan rate of  $0.05 \text{ V s}^{-1}$ .



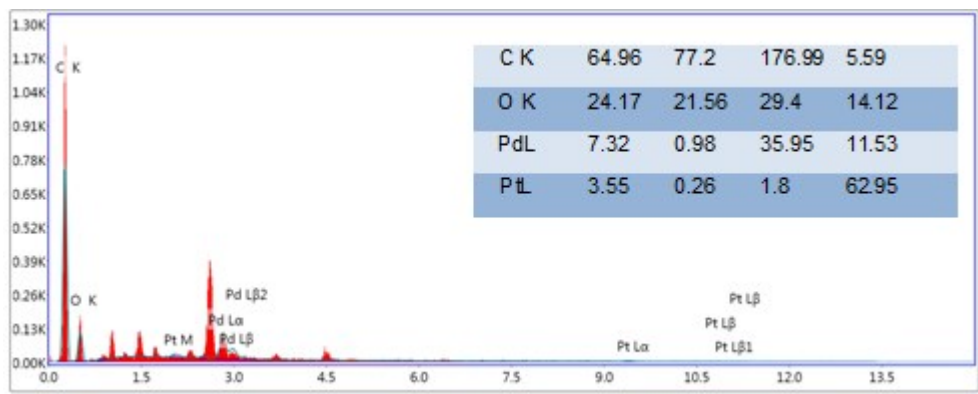
(A)



(B)

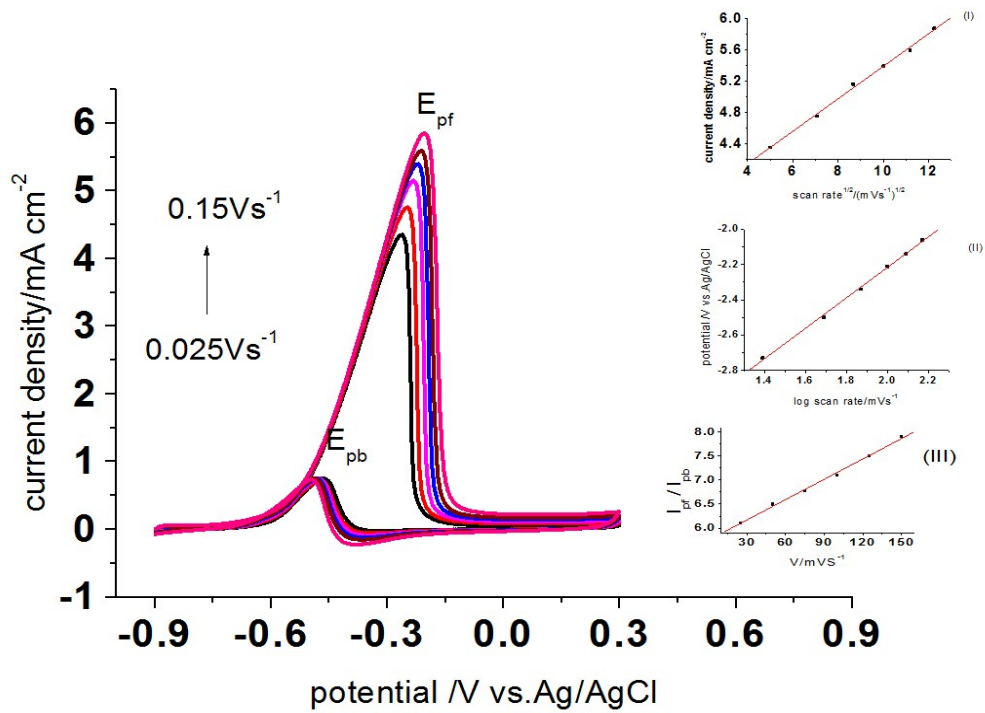


(C)

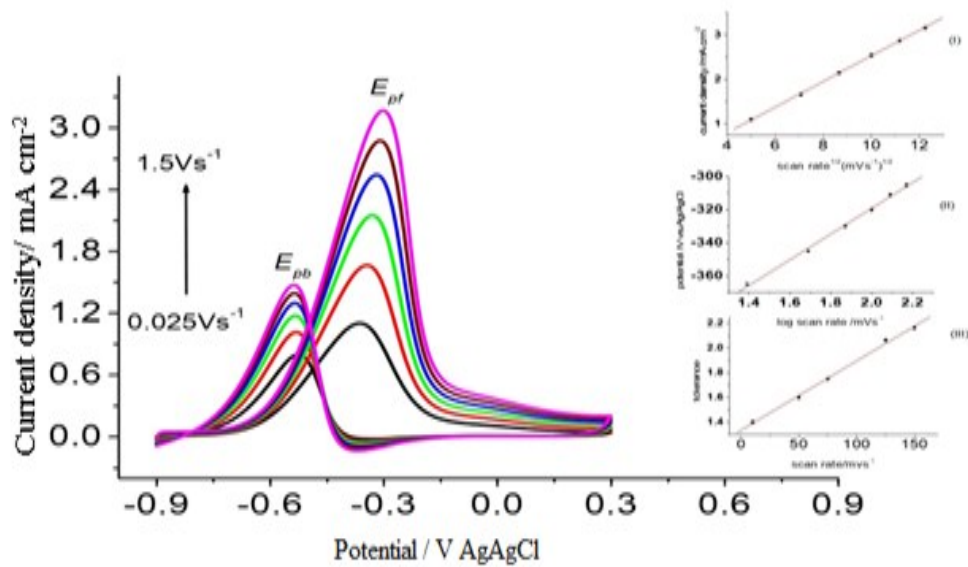


(D)

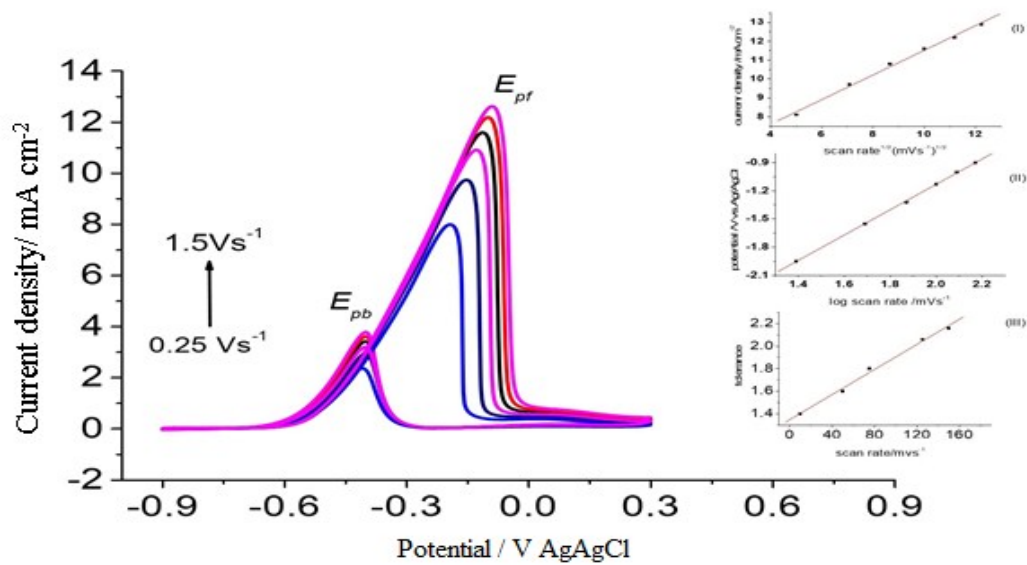
**Fig. S2** EDX results for (A) Pd/p1,2-DAAQ/GC, (B) Pt/p1,2-DAAQ/GC, (C) Pd/Pt/p1,2-DAAQ/GC and (D) Pt/Pd/p1,2- DAAQ/GC electrodes.



(A)

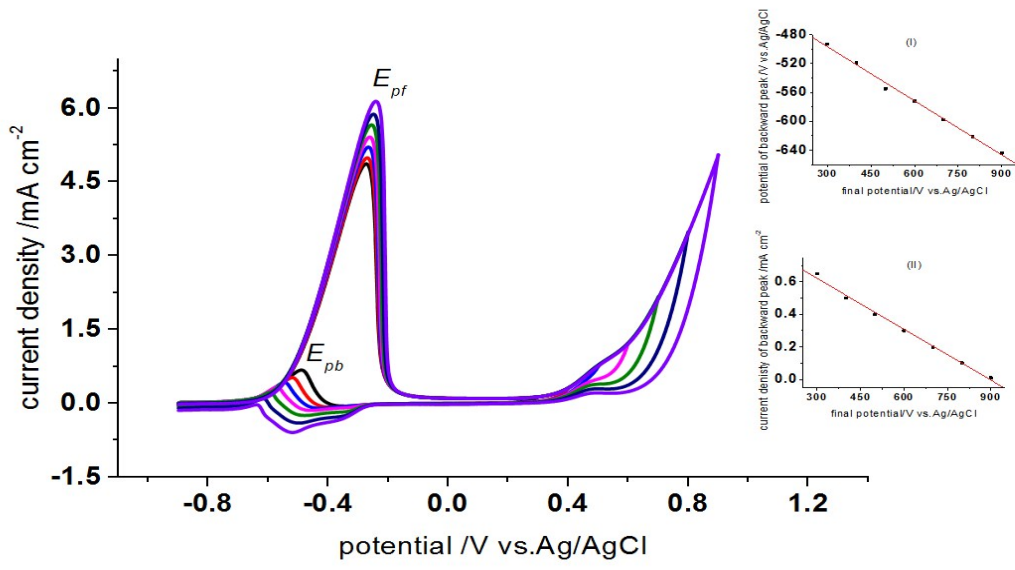


(B)

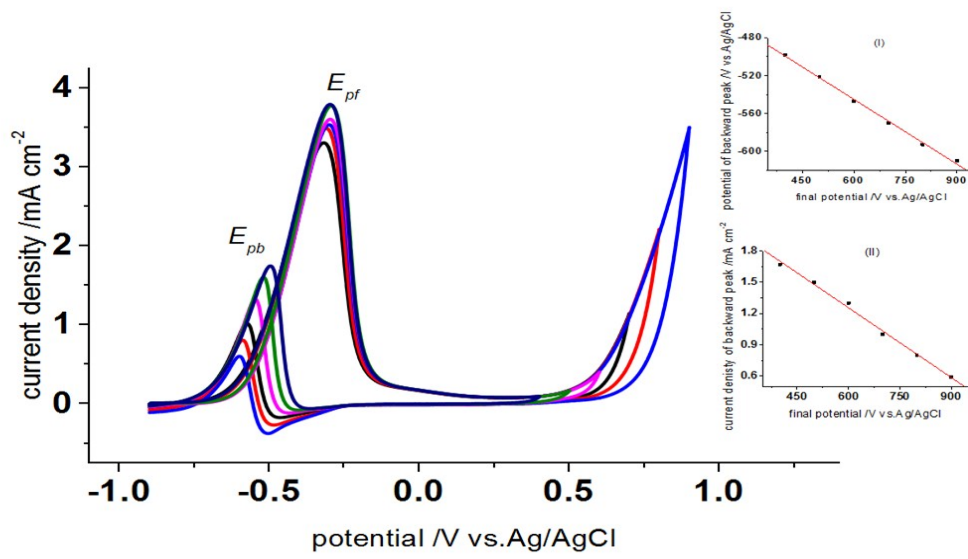


(C)

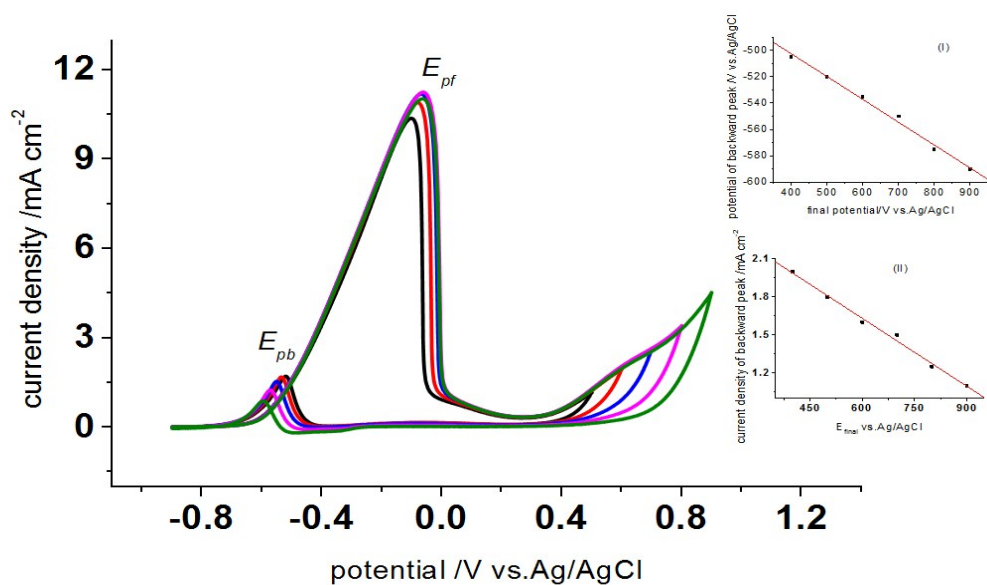
**Fig. S3** Electrooxidation of (A) 0.3 M MeOH (B) 1.0 M EtOH and (C) 0.5 M EG at Pt/Pd/p1,2-DAAQ/GC nanocatalyst electrode in 1.0 M NaOH at varied sweep rates.



(A)



(B)



(C)

**Fig. S4** Effect of upper potential limits on the electrooxidation of (A) 0.3 M MeOH, (B) 1.0 M EtOH and (C) 0.5 M EG in 1.0 M NaOH solution at Pt/Pd/p1,2-DAAQ/GC nanocatalyst electrode at scan rate 0.05 V s<sup>-1</sup>.