Supporting Information

Voltammetric determination of TBHQ at glassy carbon electrode surface activated by in-situ chemical oxidation

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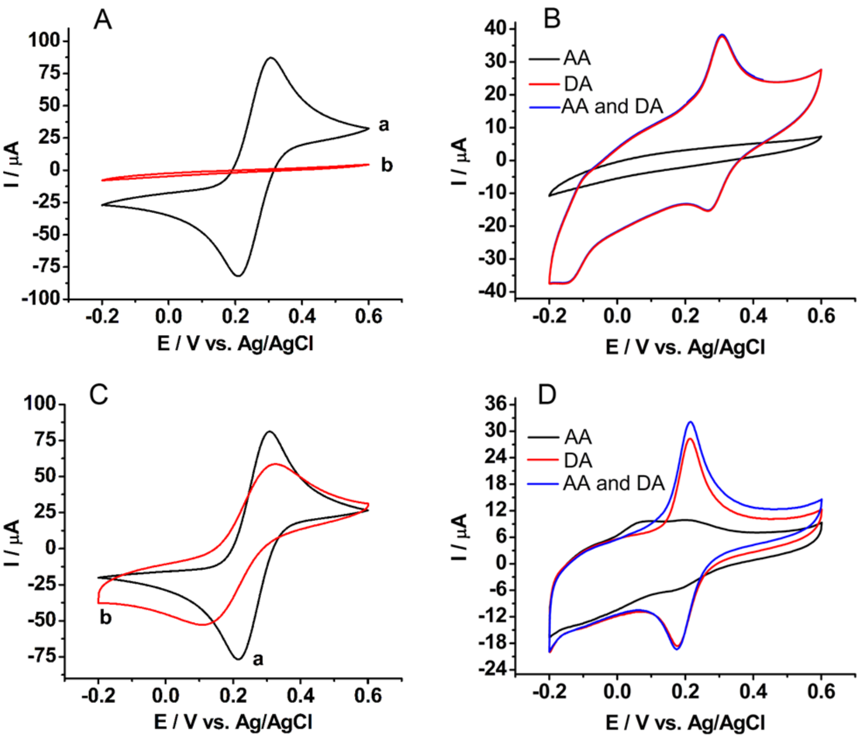

Fig. S1 (A, C) CVs of 5.0 mM $[Fe(CN)_6]^{3-/4-}$ (1:1) containing 0.1 M KCl on (a) the bare GCE and (b) the modified GCE ((A, curve b) chemically activated GCE and (C, curve b) electrochemically activated GCE); (B, D) CVs of 5.0 mM AA, DA and mixture of DA and AA on the modified GCE in 0.1 M PBS with 0.1M KCl solution (pH=6.55) at a scan rate of 0.05 V s^{-1}((B, chemically activated GCE) and (D, electrochemically activated GCE)).

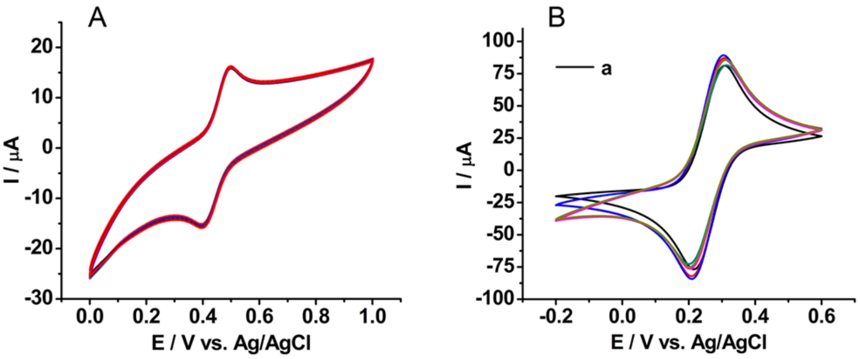

Fig. S2 (A) CVs of 0.4 mM TBHQ on the modified GCE in 5% (v/v) methanol–water solution with 0.1 M $HClO_4$ at a scan rate of 0.05 V s^{-1} for consecutive 30 circles. (B) CVs of 5.0 mM $[Fe(CN)_6]^{3-/4-}$ (1:1) containing 0.1 M KCl on the bare GCE (curve a, black) and the same modified GCE fully polished after each modification (repeating five times) at a scan rate of 0.05 V s^{-1}.

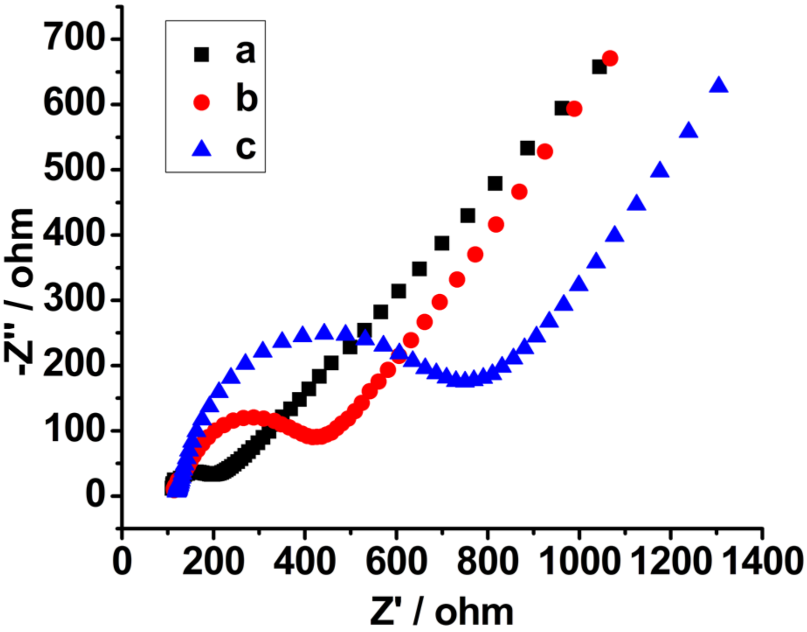

Fig. S3 Electrochemical impedance spectroscopy of (a) the bare GCE, (b) the GCE activated by the first oxidation and (c) the modified GCE.