Electronic Supplementary Material (ESI) for Analyst.

Supporting Information

Employment of electrostatic interactions for an amperometric detection of carbon nanoparticles in a FIA system

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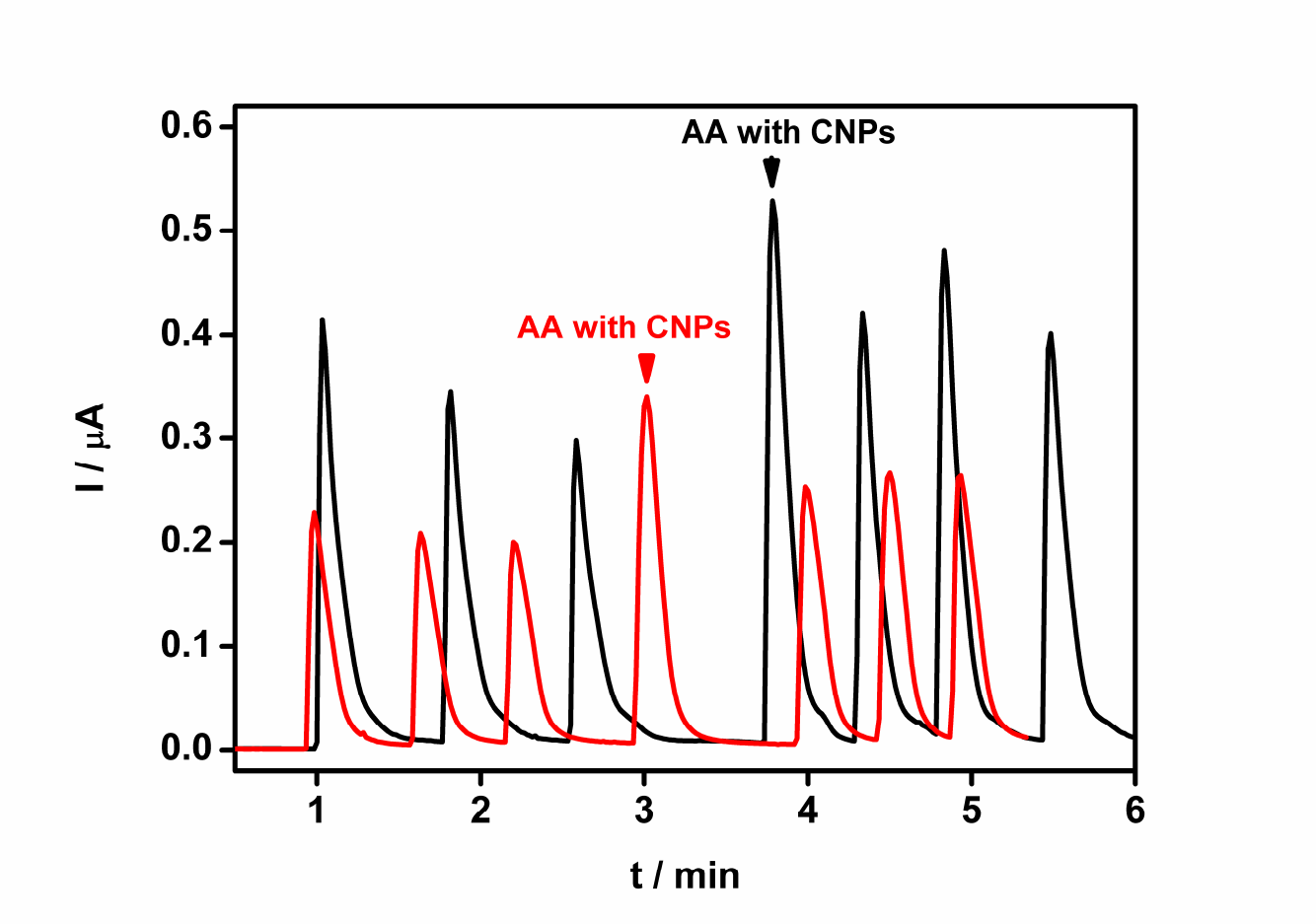

Fig.SI_1 Chronoamperometry of 1 mM AA electrooxidation performed with the use of the FIA system[9] at 0.2 V **in H_2O** but not in NaH_2PO_4 with the total flow rate fixed at 3 mL min^{-1} for samples with or without the addition of 1 mg mL^{-1} **CNPs aqueous suspension**. The sequence of the two series (black and red) was as follows: (i) three injections of AA and (ii) one injection of AA with CNPs and (iii) three injections of AA.

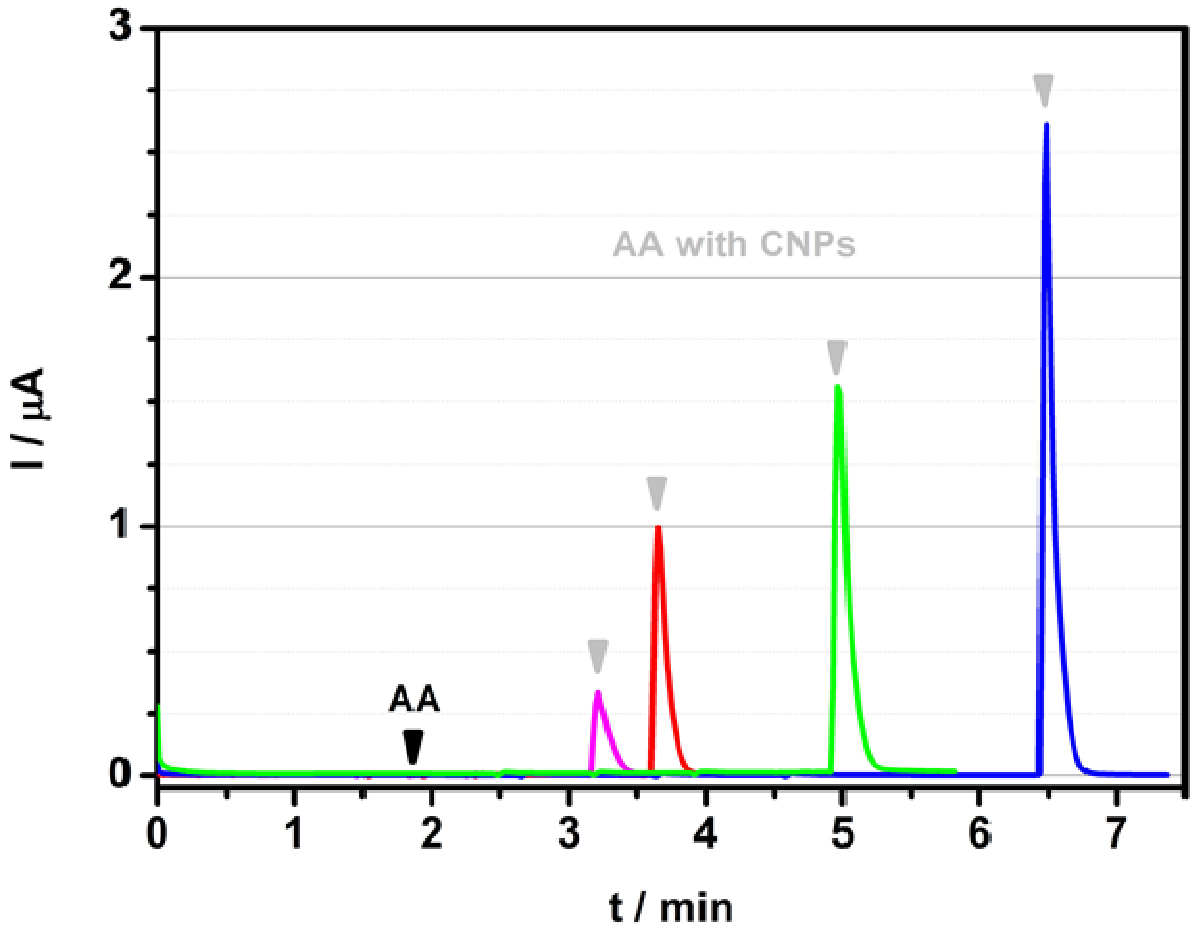

Fig.SI_2 Chronoamperometry of 1 mM AA electrooxidation performed with the use of FIA system[9] at 0.2 V in 25 mM NaH_2PO_4 with the total flow rate fixed at 3 mL min^{-1} for samples with or without the addition of 1 mg mL^{-1} **CNPs aqueous suspension**. The sequence of the four series (pink, red, green and blue) was as follows: (i) three injections of 1 mM AA and (ii) one injection of AA with CNPs.

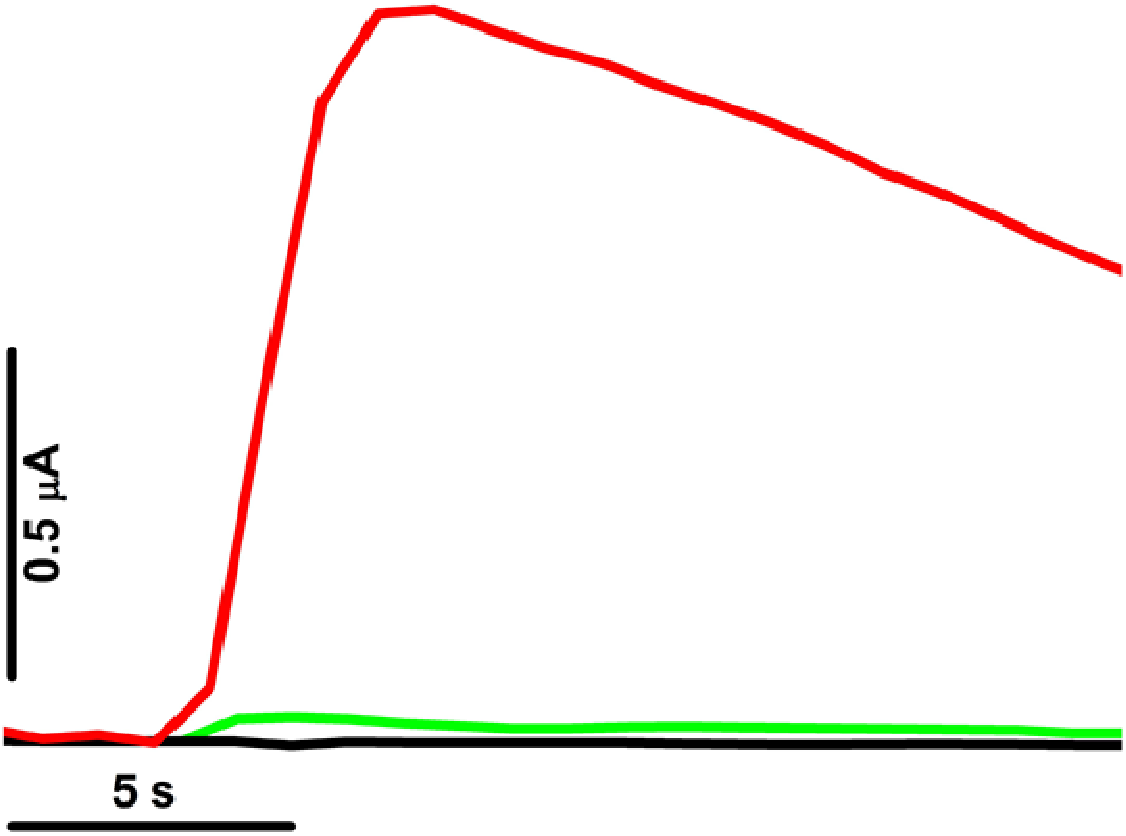

Fig.SI_3 Chronoamperometry of 20 mM deoxygenated solution of AA performed with the use of the FIA system (Fig.7B) at 0.2 V in 200 mM NaH_2PO_4 (pH 4.6) with the total flow rate fixed at 6 mL min^{-1} for samples with addition of 0.001 (black), 0.01 (green) and 0.1 (red) mg mL^{-1} CNPs suspension in water.

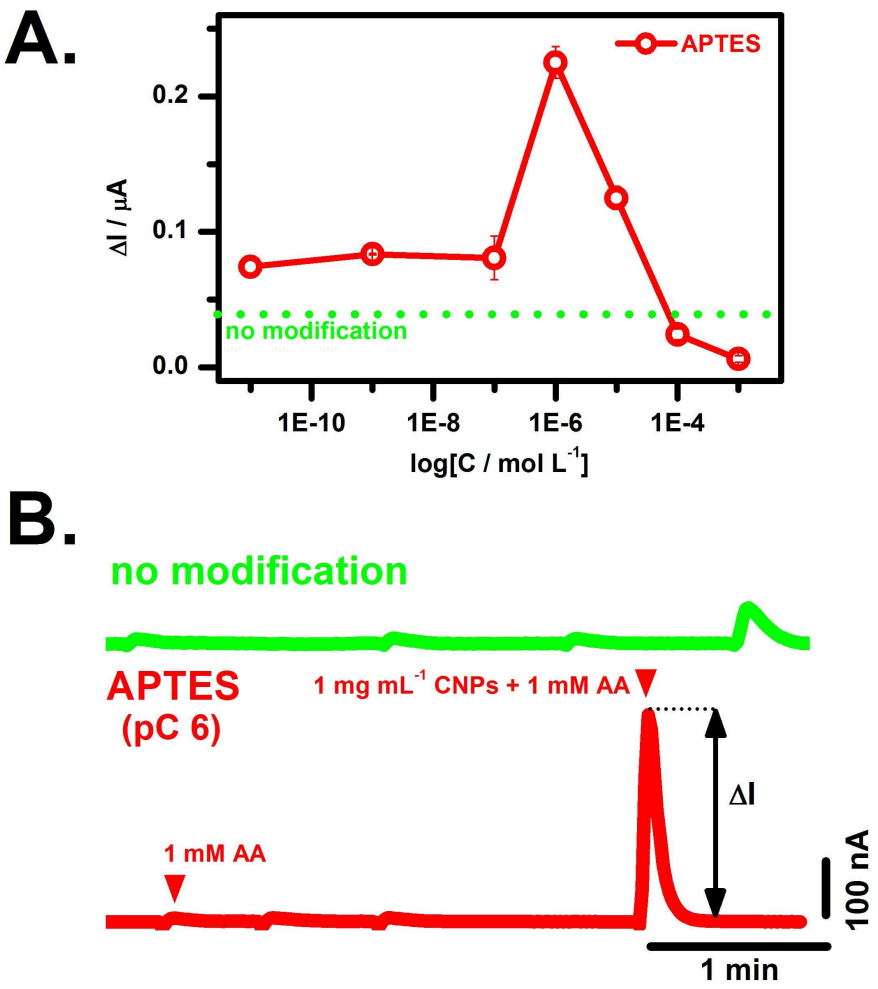

Fig.SI_4. (A) Optimization of the concentration of APTES solution (red) used for ITO modification. Baseline-corrected current (ΔI) of electrooxidation of 1 mM AA in 25 mM NaH_2PO_4 in the presence of 1 mg mL^{-1} CNPs in 25 mM NaH_2PO_4 given as the function of APTES concentration. Chronoamperometric measurements were conducted in the FIA system[9] at potential 0.2 V. A total flow rate was fixed at 3 mL min^{-1}. Each assay was repeated three times. **(B)** Chronoamperometric curves for bare ITO and ITO modified with the optimal concentration of APTES (10^{-6} mol L^{-1}).