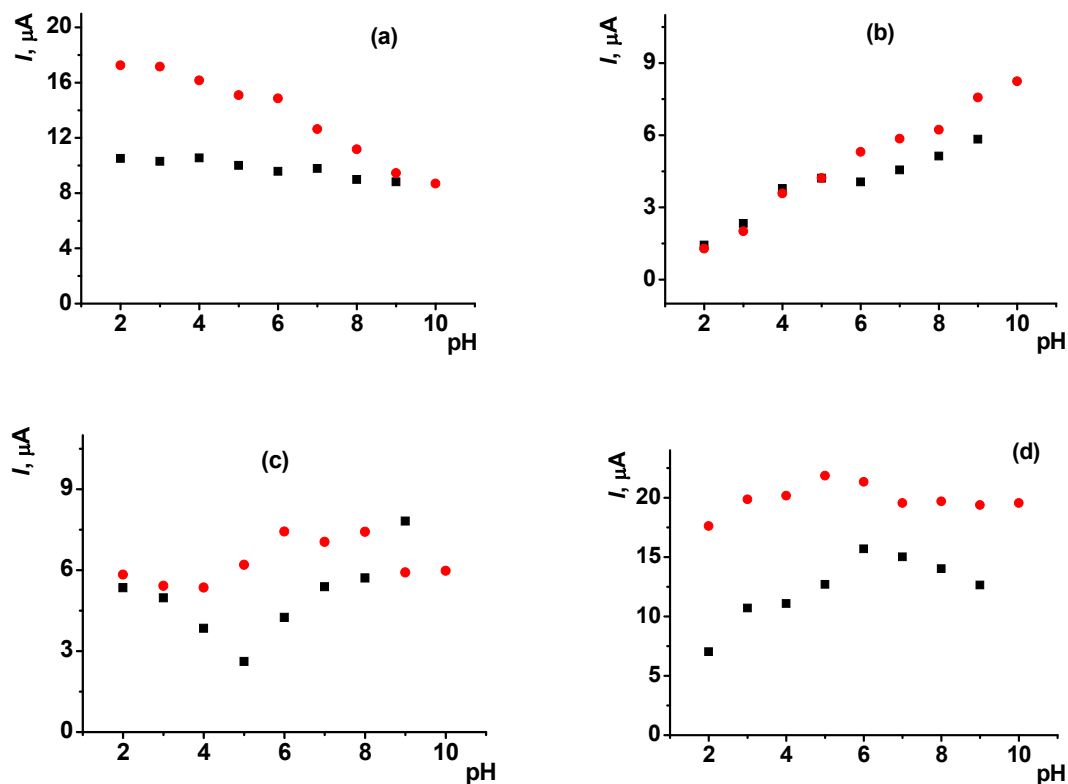
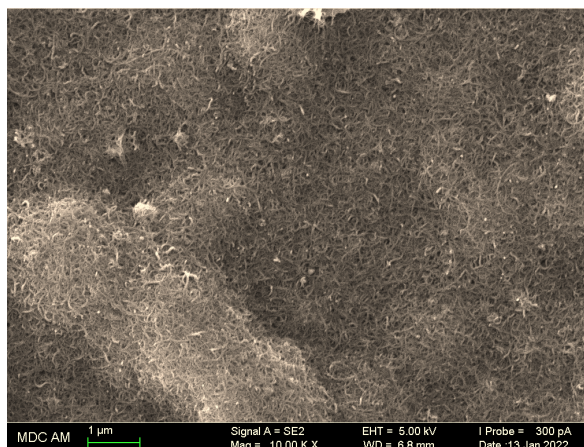


## Supplementary materials

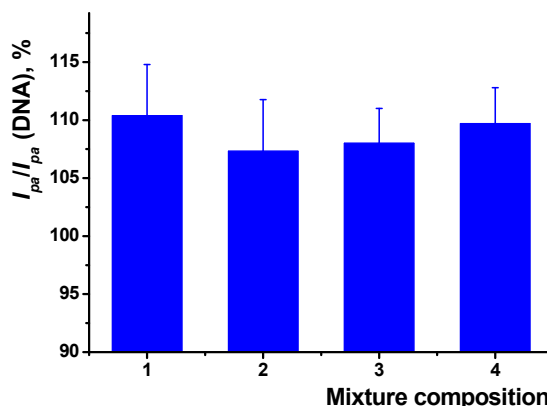
to the article “One-Step Electropolymerization of Azure A and Carbon Nanomaterials for DNA-Sensor Assembling and Doxorubicin Biosensing”  
of A. Porfireva, E. Begisheva, A. Rogov, and G. Evtugyn



**Figure S1.** The pH dependence of the monomer (a) and polymer (b) oxidation peak currents, monomer (c) and polymer (d) reduction peak currents. Measurements in 0.1 M phosphate buffer + 0.1 M  $\text{NaNO}_3$ , pH 2.0 – 10.0. Electrodes modified with PAA+CB (black symbols) and PAA+fMWCNT (red symbols).



**Figure S2.** SEM image of the glassy carbon electrode covered with fMWCNT suspension in DMF.



**Figure S3.** Oxidation peak current changes recorded with the (PAA+fMWCNT)/DNA+MB based DNA sensor in the presence of Doxorubicin -LANS® corresponding to 10 pM of doxorubicin (1), 100 pM doxorubicin dissolved together with 400 pM mannitol (2); 10 pM doxorubicin dissolved with 40 pM mannitol (3), 1 pM doxorubicin dissolved with 4 pM mannitol (4). Measurements in 0.1 M phosphate buffer + 0.1 M NaNO<sub>3</sub>, pH 7.0, scan rate 100 mV/s.

**Table S1.** Relative shift of the peak current measured after 20 min incubation of the (PAA+CB)/DNA+MB based DNA-sensor in spiked samples mimicking serum, blood plasma, artificial urine and in dissolved medications. Average ± S.D. for six individual sensors.

Sample / media	Oxidation peak current shift,%	Reduction peak current shift, %
Doxorubicin (Sigma) / Phosphate buffer	75.9±4.8	78.2±5.9
Doxorubicin (Sigma) / Ringer-Locke's solution	75.5±7.7	78.4±7.9
Doxorubicin (Sigma) / BSA solution (dilution 1:10)	75.8±4.0	78.9±4.6
Doxorubicin (Sigma) / Artificial urine	75.4±5.0	79.4±5.7
Doxorubicin -LANS®	76.4±2.8	78.5±5.7
Doxorubicin -TEVA®	75.6±7.5	78.5±8.3

**Table S2.** Relative shift of the anodic peak current measured after 20 min incubation of the (PAA+fMWCNT)/DNA+MB based DNA-sensor in spiked samples mimicking serum, blood plasma, artificial urine and in dissolved medications. Average ± S.D. for six individual sensors.

Sample / media	Oxidation peak current shift,%
Doxorubicin (Sigma) / Phosphate buffer	90.0±4.9
Doxorubicin (Sigma) / Ringer-Locke's solution	89.1±2.2
Doxorubicin (Sigma) / BSA solution (dilution 1:10)	88.3±8.9
Doxorubicin (Sigma) / Artificial urine	90.9±3.3
Doxorubicin -LANS®	110.4±4.4
Doxorubicin -TEVA®	89.6±8.7