# Cisplatin-based DNA sensing with enhanced current response

## SUPPORTING INFORMATION

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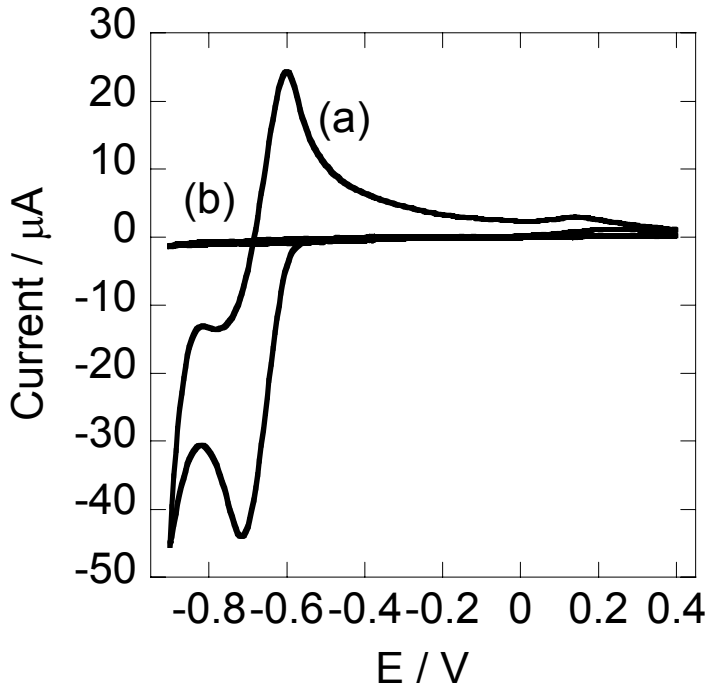


Figure S1. Cyclic voltammograms in the cisplatin-free buffer solution obtained (a) on the electrode, which had been used for the three times of potential scan in the 0.5 mM cisplatin solution and (b) after polishing the electrode surface.

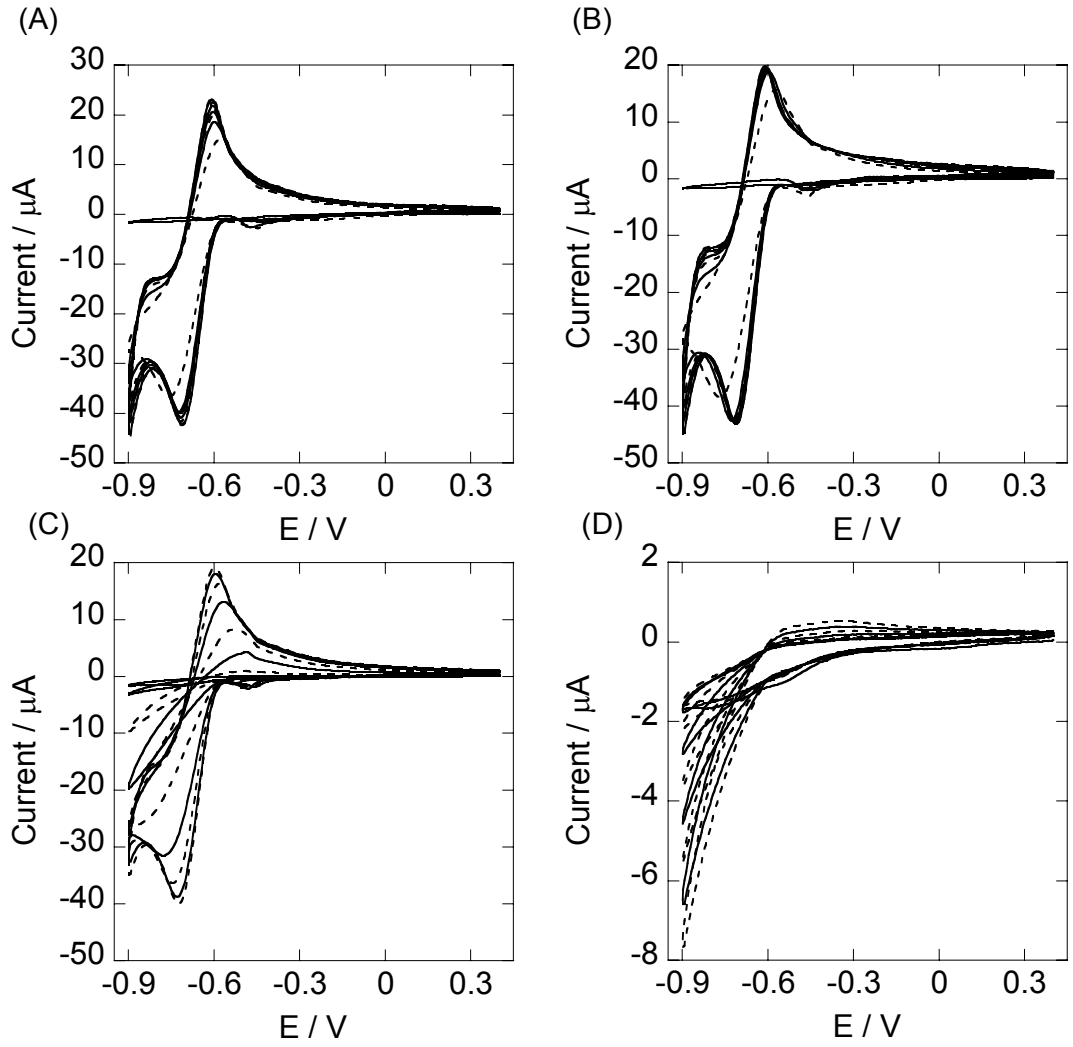


Figure S2. Cyclic voltammograms of a series of ten cycles on the glassy carbon electrode in 0.1 M phosphate buffer solution containing 0.5 mM cisplatin. DNA (from herring sperm) concentrations are (A) 30 ng/mL, (B) 300 ng/mL, (C) 3.0 μg/mL and (D) 30 μg/mL.

The complexation between cisplatin and DNA suppressed the electroreduction of cisplatin due to the decrease of the concentration of free cisplatin and, subsequently, the electrolytic current for reducing proton. Although the shapes of voltammograms in the buffer solution containing cisplatin and relatively low concentrations of DNA were nearly the same as those obtained without DNS, the increase of DNA concentration caused to delay the appearance of the peak currents for proton/hydrogen-system. Especially, when 30 μg/mL DNA was added to the buffer solution containing 0.5 mM cisplatin, reduction current for proton/hydrogen-system increased gradually by each scan, but the no peak appeared during ten scans.