

Supplementary Information

Sequence-Independent DNA Adsorption on Few-Layered Oxygen-Functionalized Graphene Electrodes: An Electrochemical Study for Biosensing Application

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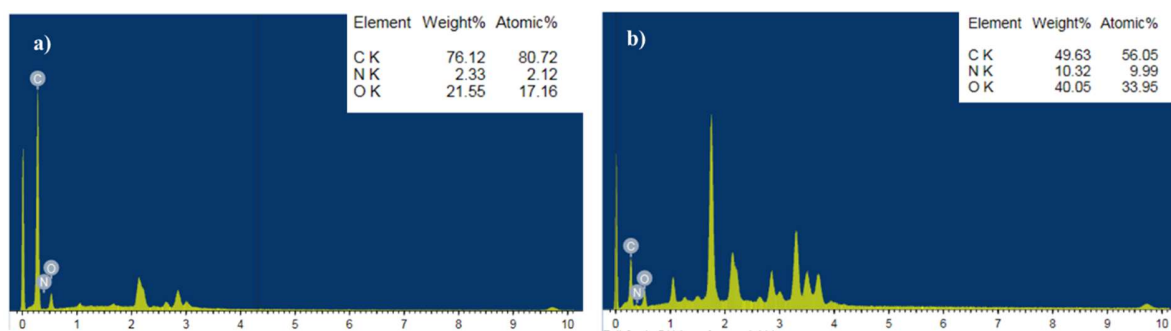
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Table S1. Single-stranded and double-stranded DNA sequences.

TNR type	Single-Stranded Sequence	#Repeats
ssCGG-8	5'-CGG CGG CGG CGG CGG CGG CGG CGG -3'	8
ssCCG-8	5'-CCG CCG CCG CCG CCG CCG CCG CCG -3'	8
ssGAA-8	5'-GAA GAA GAA GAA GAA GAA GAA GAA -3'	8
ssTTC-8	5'-TTC TTC TTC TTC TTC TTC TTC TTC -3'	8
ssCTG-8	5'-CTG CTG CTG CTG CTG CTG CTG CTG -3'	8
ssCAG-8	5'- CAG CAG CAG CAG CAG CAG CAG CAG -3'	8
Double-Stranded Sequence		
dsCGG-5	5'-CGG CGG CGG CGG CGG -3' 3'- GCC GCC GCC GCC GCC -5'	5
dsCGG-8	5'-CGG CGG CGG CGG CGG CGG CGG CGG -3' 3'- GCC GCC GCC GCC GCC GCC GCC GCC -5'	8
dsCGG-10	5'-CGG CGG CGG CGG CGG CGG CGG CGG CGG CGG -3' 3'- GCC GCC GCC GCC GCC GCC GCC GCC GCC GCC -5'	10
dsCTG-8	5'-CTG CTG CTG CTG CTG CTG CTG CTG -3' 3'- GAC GAC GAC GAC GAC GAC GAC GAC -5'	8
dsGAA-8	5'-GAA GAA GAA GAA GAA GAA GAA GAA -3' 3'-CTT CTT CTT CTT CTT CTT CTT CTT -5'	8

**Figure S1.** EDS analysis of printed Gr on ITO a) before and b) after sintering.

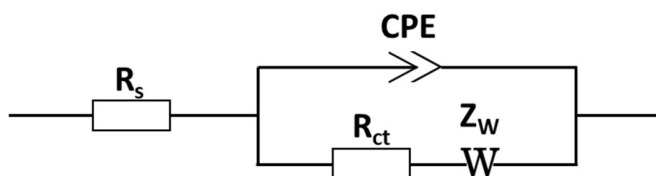


Figure S2. Randle's equivalent circuit elements.

Table S2. EIS extracted parameters of **Figure 2c**. The average values with standard error of modified Randle's equivalent circuit elements. The errors were calculated for $N \geq 4$ separate measurements.

	R_s $k\Omega$	C_{dl} $\mu F (10^{-2})$	R_{ct} $k\Omega$	W $k\Omega$
Bare ITO	0.2 (0.002)	99.9 (3.10)	9.5 (0.1)	$0.005 (1.1) \times 10^8$
GOx/ITO/before sintering	0.5 (0.020)	13.5 (0.50)	246.0 (3.2)	$8.9 (1.3) \times 10^3$
GOx/ITO/after sintering	0.2 (0.001)	1680.0 (41.0)	4.2 (0.1)	$6.3 (6.3) \times 10^1$

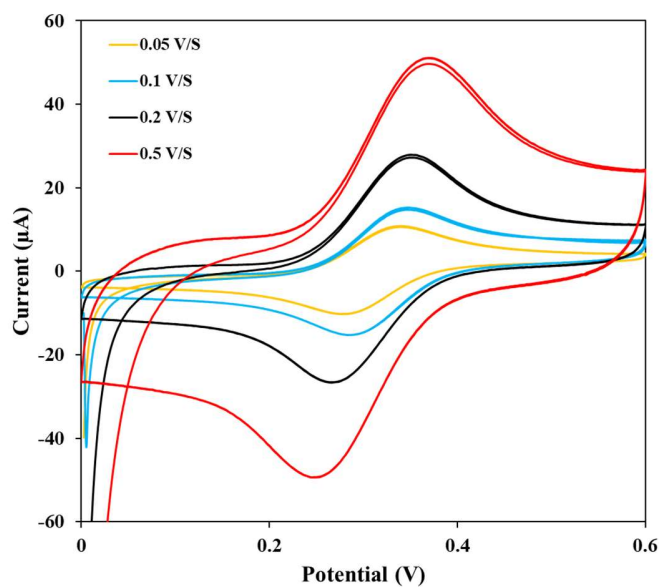


Figure S3. CV curves of 10 nM dsCGG-8 at different scan rates.