Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B

SUPPORTING INFORMATION

Graphene oxide-based homogenous biosensing platform for ultrasensitive DNA detection based on chemiluminescence resonance energy transfer and exonuclease III-assisted target recycling amplification

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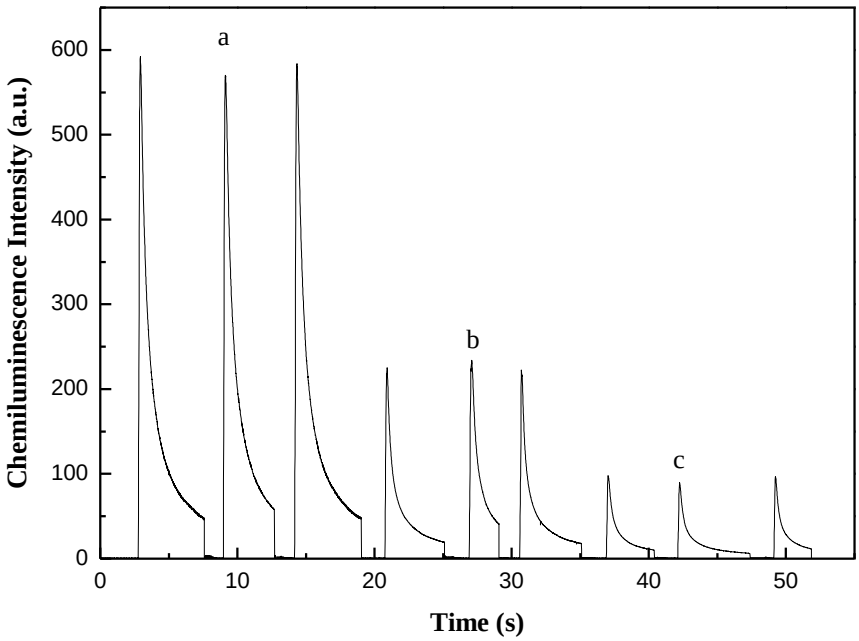

Figure S1. Comparison of the quenching efficiency of GO and SWCNT in this CRET system. Measurement results of the sensing system under different conditions. (a) luminol–H_2O_2–HRP + probe (1.0×10^{-7} M) (b) luminol–H_2O_2–HRP + SWCNT (80 μg/mL) + probe (1.0×10^{-7} M); (c) luminol–H_2O_2–HRP + GO (80 μg/mL) + probe (1.0×10^{-7} M).

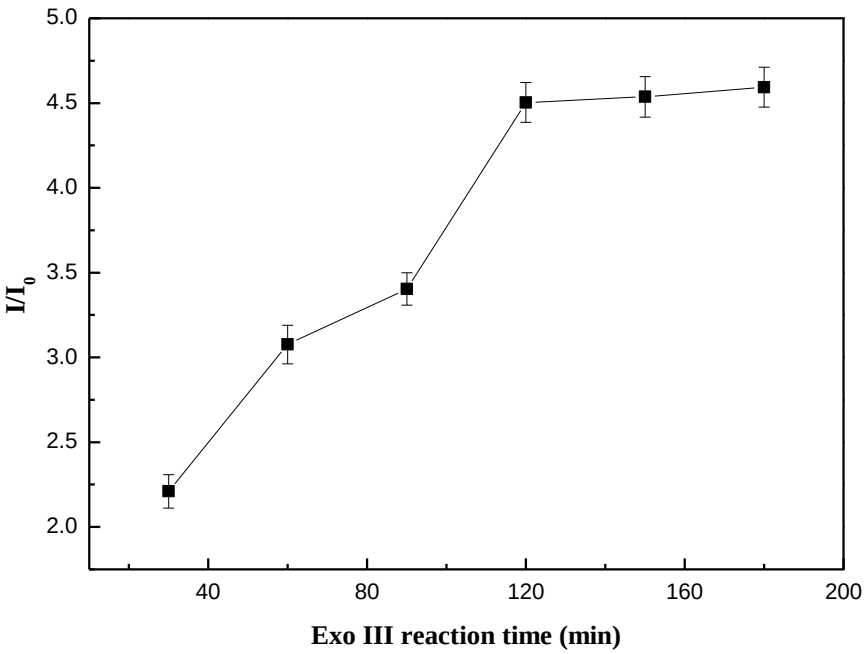

Figure S2. Effect of Exo III reaction time on the sensitivity of the CRET platform for DNA detection.

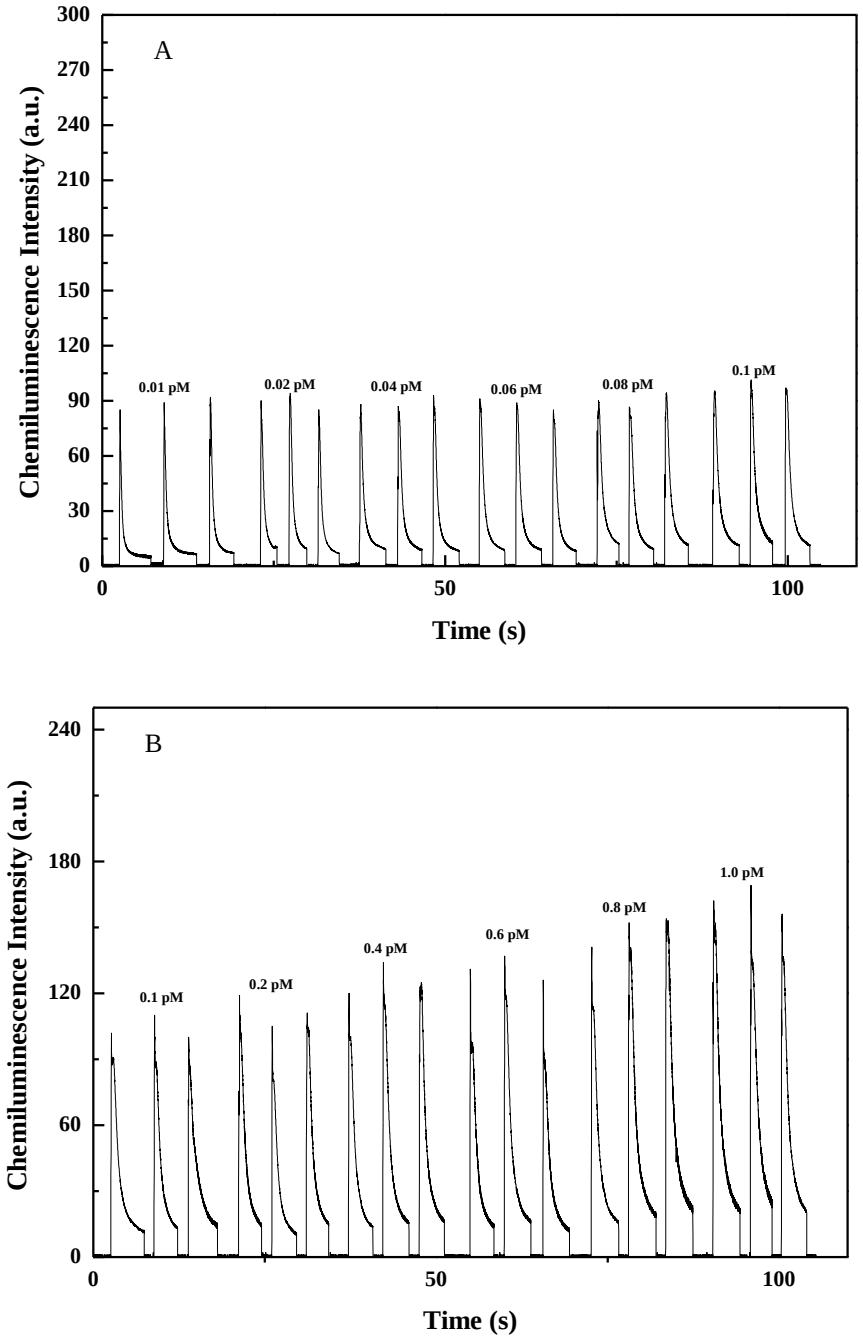

Figure S3. Representative recorder outputs of the CRET system for target DNA with different concentrations in the absence of Exo III.

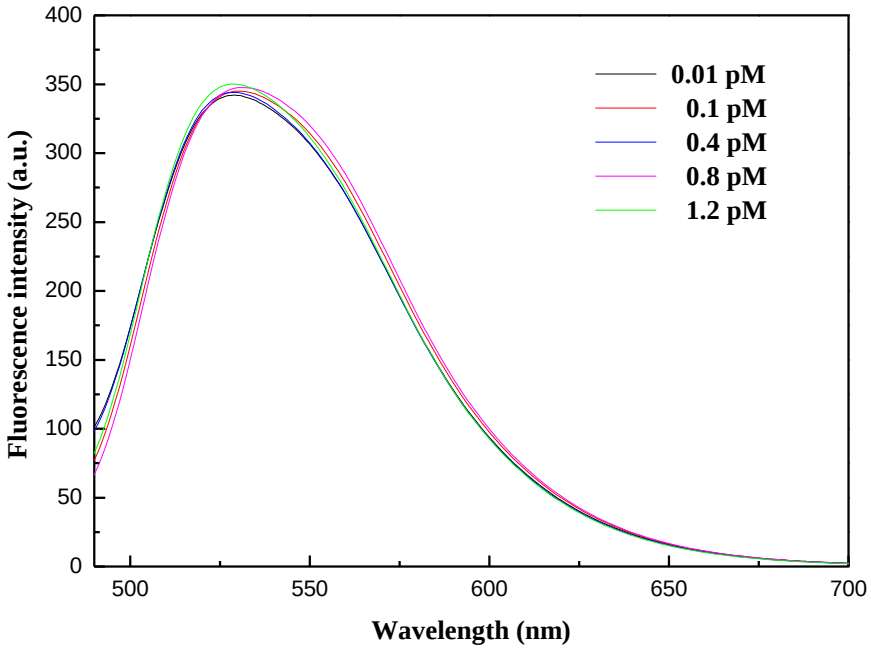

Figure S4. Response of the GO-based FRET system to target DNA with different concentrations (0.01 pM, 0.1 pM, 0.4 pM, 0.8 pM and 1.2 pM) in the presence of 20 U Exo III.