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# Scanning Electrochemical Microscopy of DNA Monolayers Modified with Nile Blue

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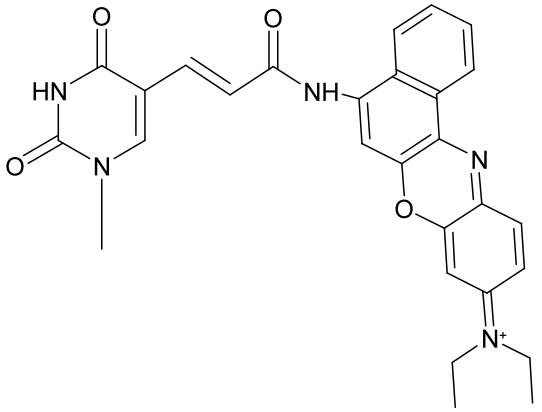
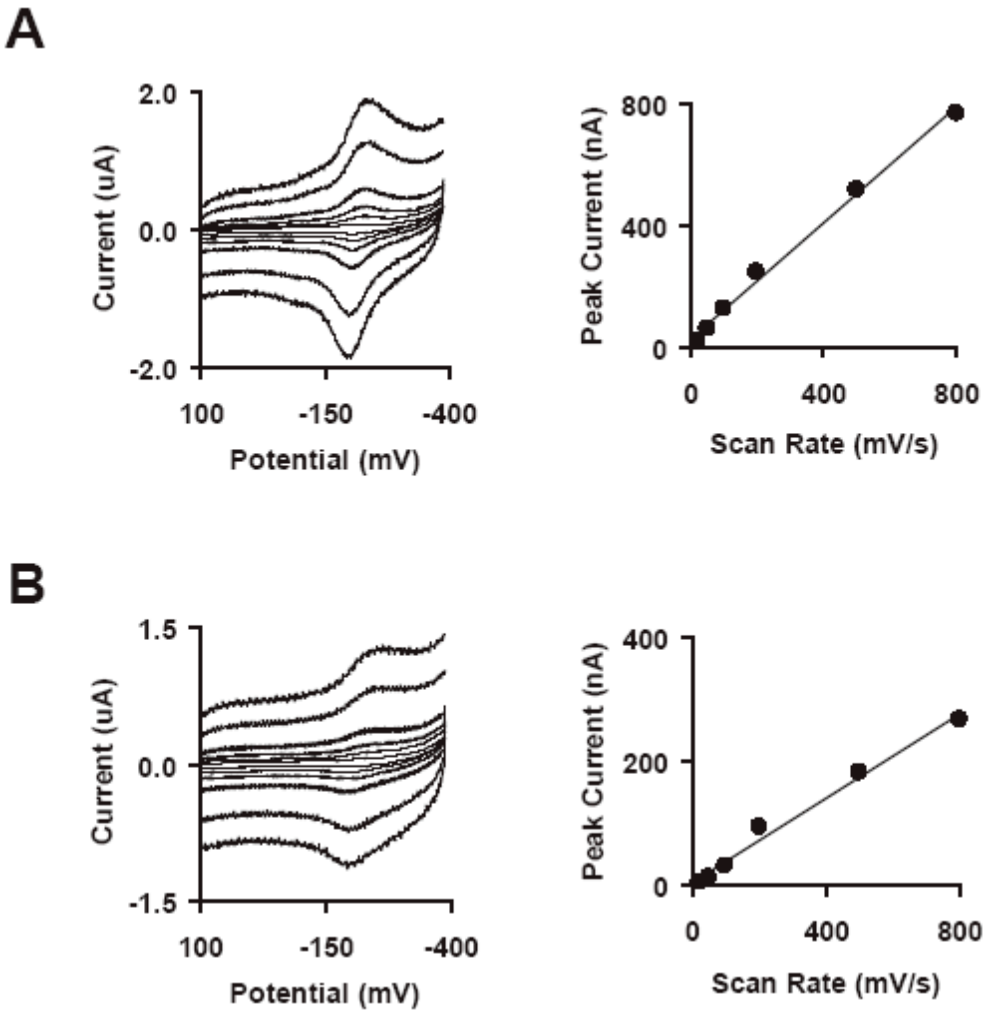
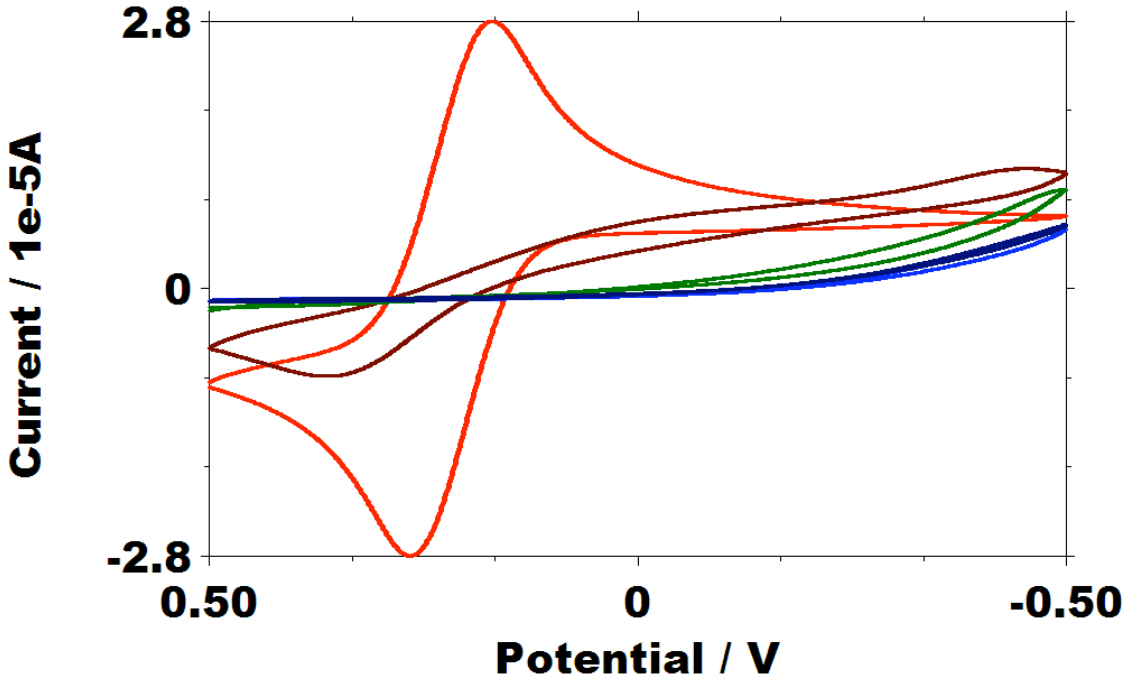


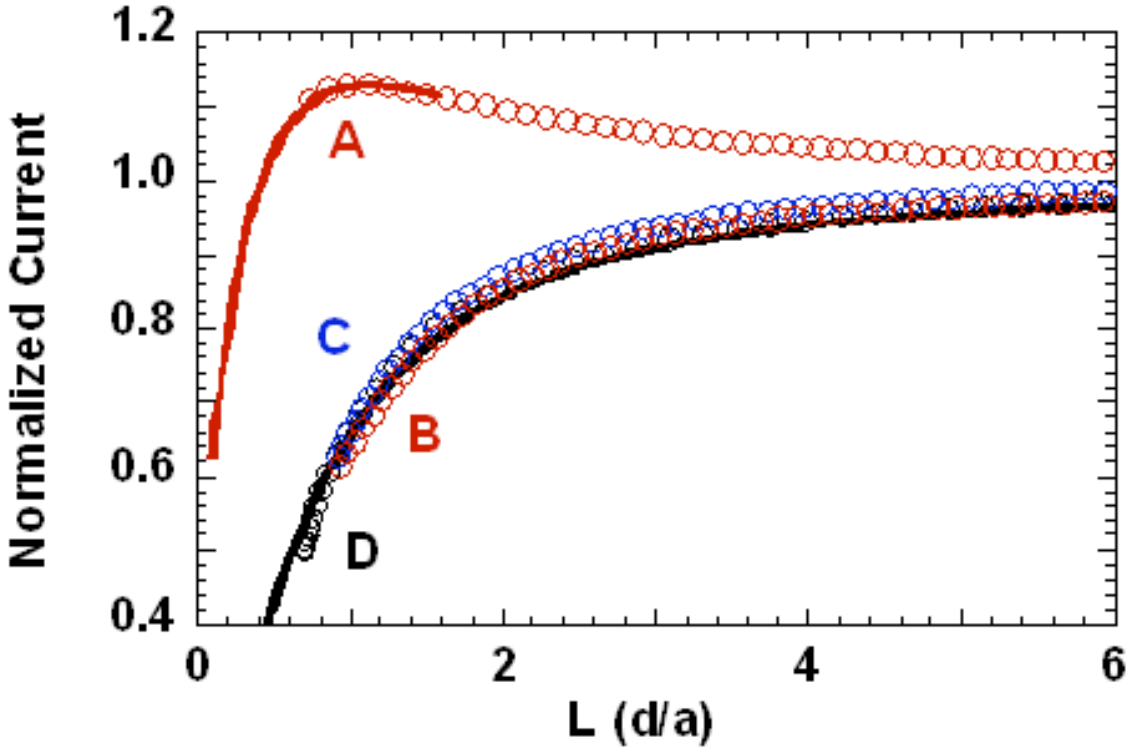

**Supporting Figure 1**. Schematic illustration of the of the Nile Blue modified uridine.




**Supporting Figure 2**. Cyclic voltammetry of DNA monolayers at various scan rates modified with NB at the bottom (A) and top (B) in pH =7.1, 5 mM NaPi, 50 mM NaCl buffer. The corresponding plots of peak current as a function of scan rate are shown on the right. The sequence was 5'-TGC GTG CTT TAT ATC *U*C-3' (bottom NB) and 5'-*U*GC GTG CTT TAT ATC TC-3' (top NB) where the italicized U indicates the location of the NB moiety.




**Supporting Figure 3**. Successive cyclic voltammograms of ferricyanide at a bare Au electrode in pH =7.1, 5 mM NaPi, 50 mM NaCl buffer before (red) and after (other colors) addition of 1 mM 11-mercaptoundecylphosphoric acid to the buffer. The voltammograms correspond to different exposure times in the 11-mercaptoundecylphoshoric acid containing buffer. Complete attenuation of the ferricyanide signal is observed within 15 minutes.




**Supporting Figure 4:** SECM approach curves taken for Nile Blue-DNA monolayers before (**C, D**) and after (**A, B**) addition of 1.5 $\mu$M Methylene Blue at substrate biases of 0 mV (**B, D**) and -300 mV (**A, C**). Approach curves were taken in pH= 7.2, 20 mM $Na_2HPO_4$, 80 mM NaCl, and 5 mM $K_4Fe(CN)_6$ buffer. The sequence was 5'-*U*GC GTG CTT TAT ATC TC-3' where the italicized U indicates the location of the NB moiety. Theoretical fits for positive and negative feedback are shown as solid lines for comparison.