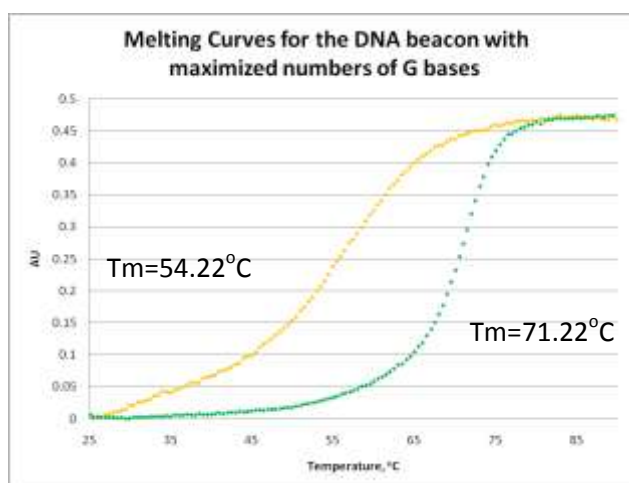


Electronic Supplementary Information

**DNA Interactions with a Methylene Blue Redox Indicator Depend on the DNA Length and are Sequence Specific**

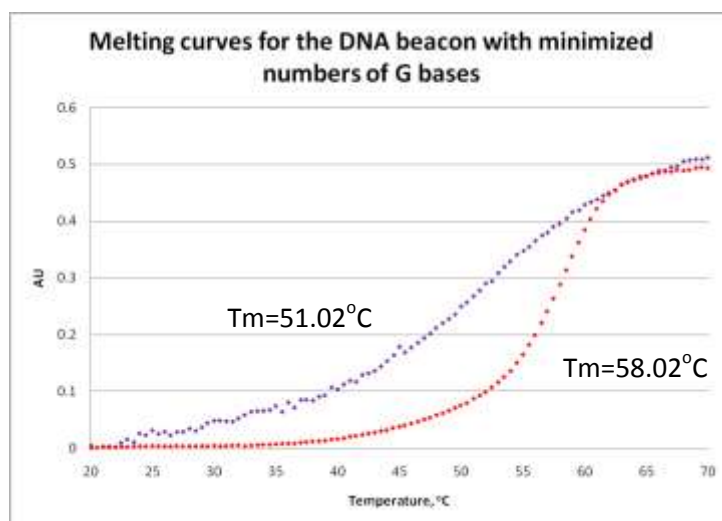
Elaheh Farjami, Lilia Clima, Kurt V. Gothelf, and Elena E. Ferapontova

**Figures**



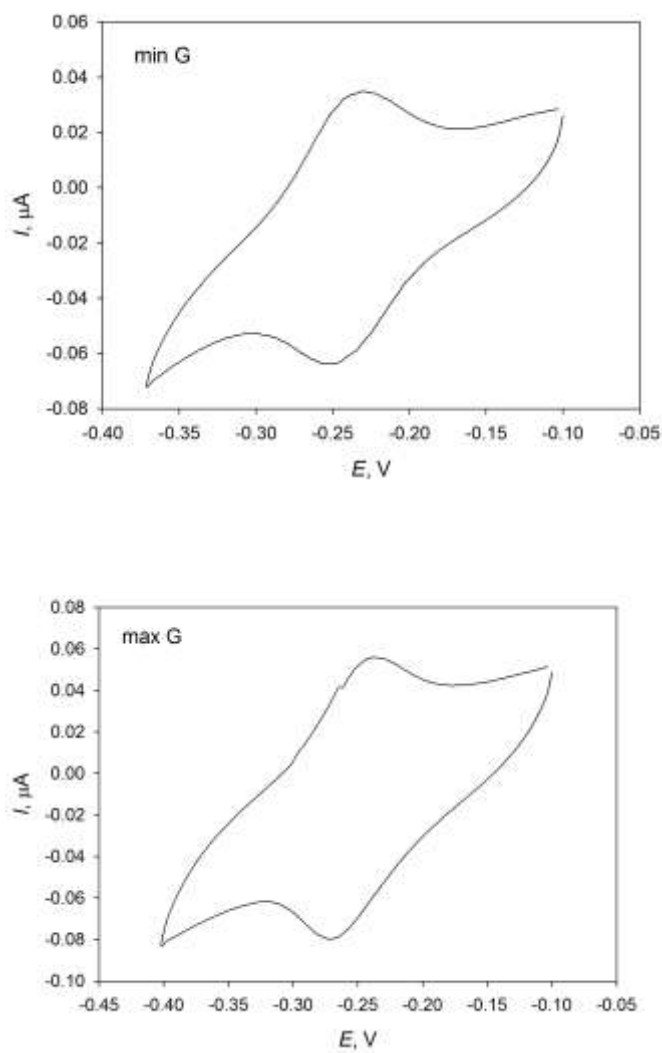
**Figure 1aS** .Melting curves for the DNA beacon with maximized numbers of G bases.

The orange dotted line (···) corresponds to 5  $\mu$ M DNA with a maximized amount of G bases, 20 mM phosphate, 150 mM NaCl, 5 mM MgCl<sub>2</sub>, pH 7.0, T<sub>m</sub>=54.22°C. The green dotted line (···) corresponds to 5  $\mu$ M DNA with a maximized amount of G bases, 5  $\mu$ M fully complementary DNA, 20 mM phosphate, 150 mM NaCl, 5 mM MgCl<sub>2</sub>, pH 7.0., T<sub>m</sub> =71.22°C.



**Figure 1bS**. Figure 1a .Melting curves of 20 nts DNA with a minimized amount of G bases.

The violet dotted line (···) corresponds to 5  $\mu$ M DNA with a minimized amount of G bases, 20 mM phosphate, 150 mM NaCl, 5 mM MgCl<sub>2</sub>, pH 7.0, T<sub>m</sub>=51.02°C. The red dotted line (···) corresponds to 5  $\mu$ M DNA with a minimized amount of G bases, 5  $\mu$ M fully complementary DNA, 20 mM phosphate, 150 mM NaCl, 5 mM MgCl<sub>2</sub>, pH 7.0., T<sub>m</sub> =58.02°C



**Figure 2S.** Typical CVs of the MB-labeled folded hairpin DNA beacon structures, from which the surface coverage with DNAs has been determined. Scan rate is  $100 \text{ mV s}^{-1}$ .