

Supporting Information

DNA-mediated Electron Transfer in Naphthalene-modified Oligonucleotides

Makiko Tanaka[†], Benjamin Elias[§], and Jacqueline K. Barton*

*Division of Chemistry and Chemical Engineering,
California Institute of Technology,
Pasadena, California*

* To whom correspondence should be addressed.

E-mail: jkbaron@caltech.edu

([†]) Present address: Department of Materials Chemistry and Engineering, School of Engineering, Nihon University, Koriyama, Fukushima 963-8642, Japan.

([§]) Present address: Chimie organique et médicinale, Université catholique de Louvain, place Louis Pasteur 1/2, B-1348 Louvain-la-Neuve, Belgium.

Table of contents

Figure S1.	HPLC chromatogram of naphthalene-modified DNA	p1-2
Figure S2.	Mass spectra of naphthalene-modified DNA	p3-4
Figure S3.	UV-vis absorption spectra of naphthalene-modified DNA	p5-6

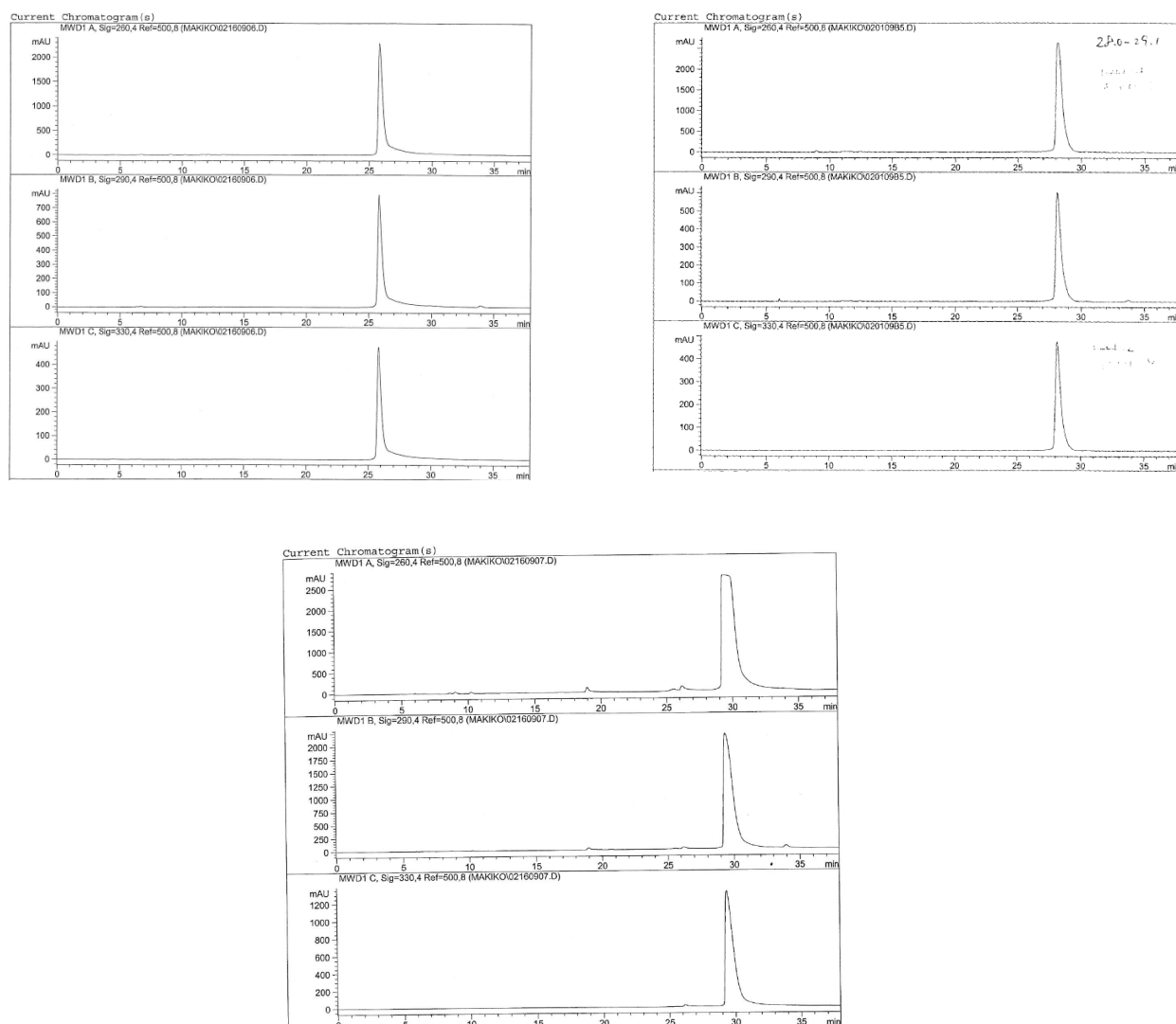
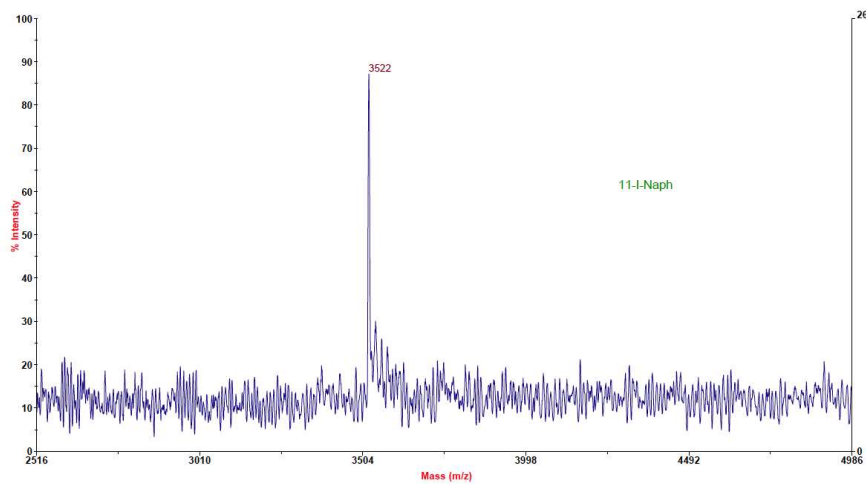
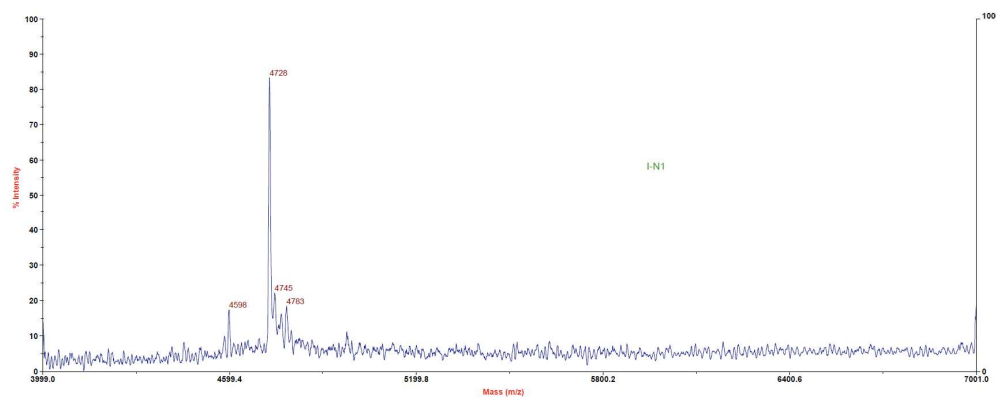


Figure S1. HPLC chromatogram of naphthalene-modified DNA (DMT OFF) 11mer (3'-TAC TGT AGG G^NU-5') for set I and IV (top left), 15mer (3'-TCA TGT AAA AAA AA^NU-5') for set II (top right) and 15mer (3'-TGT ACA TTT TTT ^{Br}UT^NU-5') for set III (bottom). The largest peaks were collected.

(a)



(b)



(c)

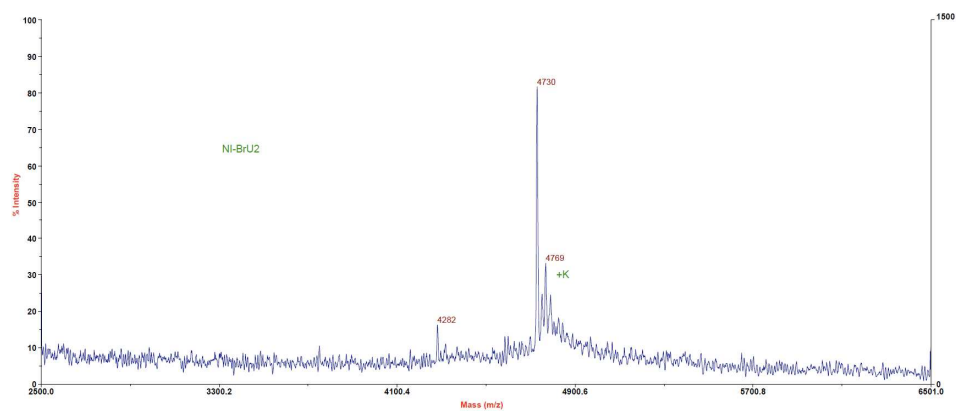
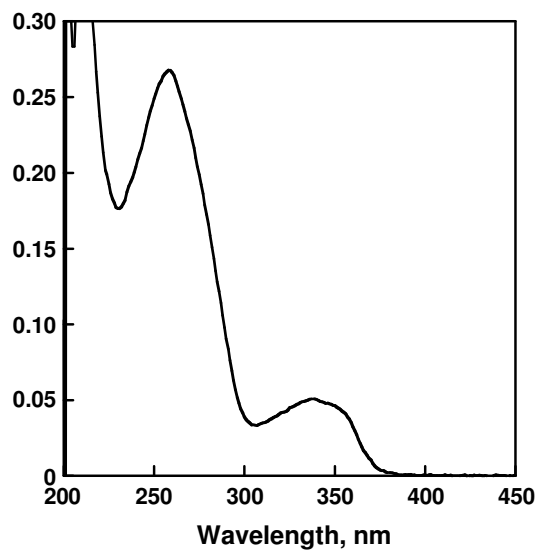


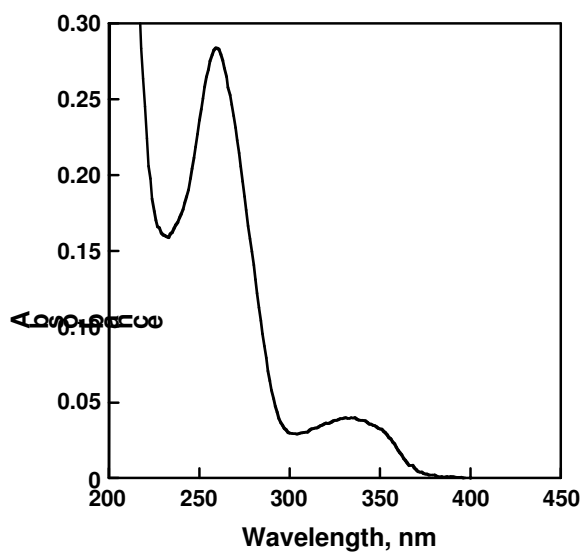
Figure S2. Mass spectra of naphthalene-modified DNA (a) 11mer (3'-TAC TGT

AGG G^NU-5') ; m/z = 3522 (calculated : 3523), (b) 15mer (3'-TCA TGT AAA AAA AA^NU-5') ; m/z = 4728 (calculated : 4728) and (c) 15mer (3'-TGT ACA TTT TTT Br^NUT^NU-5') ; m/z = 4730 (calculated : 4730).

(a)



(b)



(c)

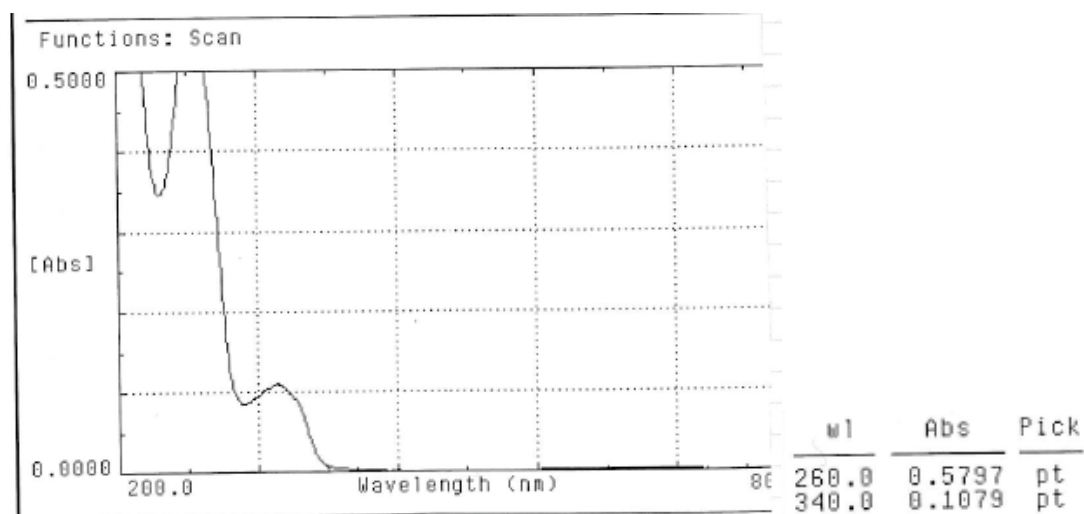


Figure S3. UV-vis absorption spectra of (a) 11mer (3'-TAC TGT AGG G^NU-5'), (b) 15mer (3'-TCA TGT AAA AAA AA^NU-5') and (c) 15mer (3'-TGT ACA TTT TTT BrUT^NU-5') naphthalene-modified DNA in 50 mM TRIS-HCl, pH 7.4, 100 mM NaCl.