Supporting information for

"Tip-Enhanced Raman Spectroscopy of Combed Double-Stranded DNA Bundles"

Samar Najjar,[†] David Talaga,[†] Léonard Schué,[†] Yannick Coffinier,[‡] Sabine Szunerits,[‡] Rabah Boukherroub,[‡] Laurent Servant,[†] Vincent Rodriguez,[†] and Sébastien Bonhommeau[*,†]

[†]Université de Bordeaux, Institut des Sciences Moléculaires, CNRS UMR 5255, F-33400 Talence, France, and [‡]Institut de Recherche Interdisciplinaire, CNRS USR 3078, Parc de la Haute Borne, 50 Avenue de Halley-BP 70478, 59658 Villeneuve d'Ascq, France.

*To whom correspondence should be addressed. E-mail: s.bonhommeau@ism.u-bordeaux1.fr

Table S1. Vibrational modes (in cm^{-1}) of OTS, SA, EDTA and Tris-HCl molecules.

OTS	SA	EDTA	Tris-HCl
-	-	346w	394w
461w	465vw	465w	-
-	-	486w	-
-	-	-	607w
-	624vw	617w	-
-	655w	-	-
-	-	710w	-
-	-	-	760m
892w	892w	-	-
-	-	901m	-
-	-	919m	911m
-	930m	945w	-
-	-	960m	-
-	-	993w	-
-	1024vw	-	-
1065w	-	1044w	1052m
-	-	1081w	-
1096w	-	1106m	-
1130w	-	1137w	-
1175vw	-	-	1184m
-	-	1229m	-
-	-	1270w	-
1299m	-	-	1295m
-	-	1326m	-
-	1350w	1355w	-
1369vw	-	1375vw	1384vw
-	1418m	1397m	1405w
1440m	-	1429m	-
1460w	-	1471m	1464m
-	-	-	-
-	1534vw	-	1544vw
-	-	1603w	-
-	1639w	-	1637vw
-	-	1655w	-
-	-	1673w	-
-	1694vw	-	-
-	2093vw	-	-
2636vw	-	-	-
-	2688vw	-	2686vw
2726w	-	-	-
-	-	-	2762m
-	-	2784w	-
-	-	-	-
2853s	2848vw	2853w	-
2884s	-	-	2893s
2907m	-	2912w	-

2934m	2938m	-	2945vs
2968vw	-	2960s	-
-	-	2983s	-
-	-	3003m	-
-	-	3020m	-
-	-	-	3107w
-	-	-	3187s
-	3231s	-	3232s
-	-	-	3283m
-	-	3307vw	-
-	-	-	3337w
-	-	3399w	-
-	3433s	-	-
-	-	-	3462vw
-	-	3520w	-
-	3578m	-	-

Abbreviations: Intensities are designated as vs (very strong), s (strong), m (medium), w (weak) or vw (very weak).

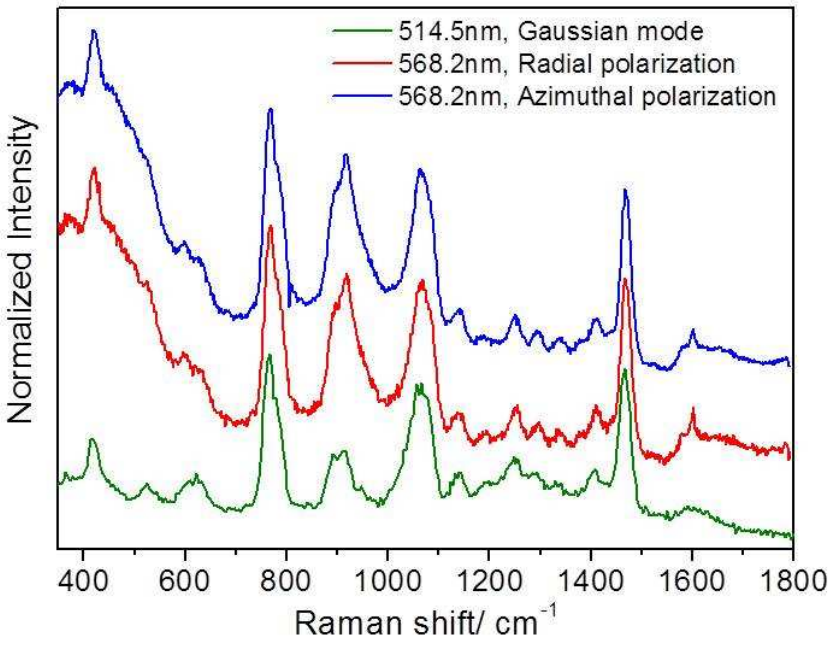

Figure S1. Comparison between Raman spectra of dense double-stranded DNA stacks resulting from confocal Raman measurements under linearly polarized 514.5 nm (green) irradiation and 568.2 nm irradiation in radial (red) and azimuthal (blue) laser polarization. Measurements at 514.5 nm were performed using a 100× air objective (N.A. = 0.90) while measurements at 568.2 nm were carried out using a 60× oil immersion objective (N.A. = 1.42) in order to be exactly in the same experimental conditions as for TERS studies. Almost the same Raman-active modes are observed. The slight differences between measurements under 514.5 and 568.2 nm (around 490 and 910 cm^{-1}, in particular) can be assigned to a stronger contribution of the borosilicate glass slide at this latter wavelength because an immersion objective is employed. Therefore, confocal Raman under 514.5 nm irradiation (presented in Figure 2 of the main text) and TER measurements under 568.2 nm irradiation (presented in Figures 3 and 4 of the main text) can be safely compared with each other.