

Electronic Supplementary Information

Synthesis of a Multibranched Porphyrin-Oligonucleotide Scaffold for the Construction of DNA-Based Nano-Architectures

Guillaume Clavé,^a Grégory Chatelain,^a Arianna Filoramo,^a Didier Gasparutto,^b Christine Saint-Pierre,^b Eric Le Cam,^c Olivier Piétrement,^c Vincent Guérineau,^d and Stéphane Campidelli*^a

^a CEA Saclay, IRAMIS, Service de Physique de l'Etat Condensé (URA CNRS 2464), Laboratoire d'Electronique Moléculaire, F-91191 Gif-sur-Yvette, France. Fax: +33 (0)1 69 08 66 40; Tel: +33 (0)1 69 08 51 34; E-mail: stephane.campidelli@cea.fr

^b Laboratoire Chimie Inorganique et Biologique/UMR E3 CEA-UJF, INAC (FED n°4177), CEA Grenoble, F-38054 Grenoble, France.

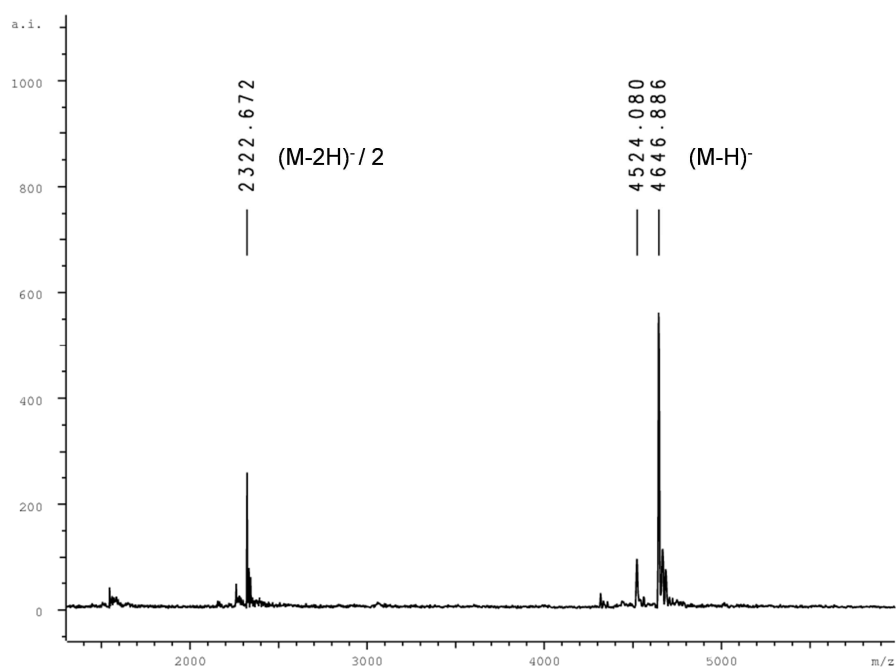
^c Maintenance des Génomes, Microscopies Moléculaires et Bionanosciences, UMR 8126 CNRS and Univ. Paris Sud, F-94805 Villejuif, France.

^d CNRS, Institut de Chimie des Substances Naturelle, Avenue de la Terrasse, 91198 Gif-sur-Yvette Cedex, France.

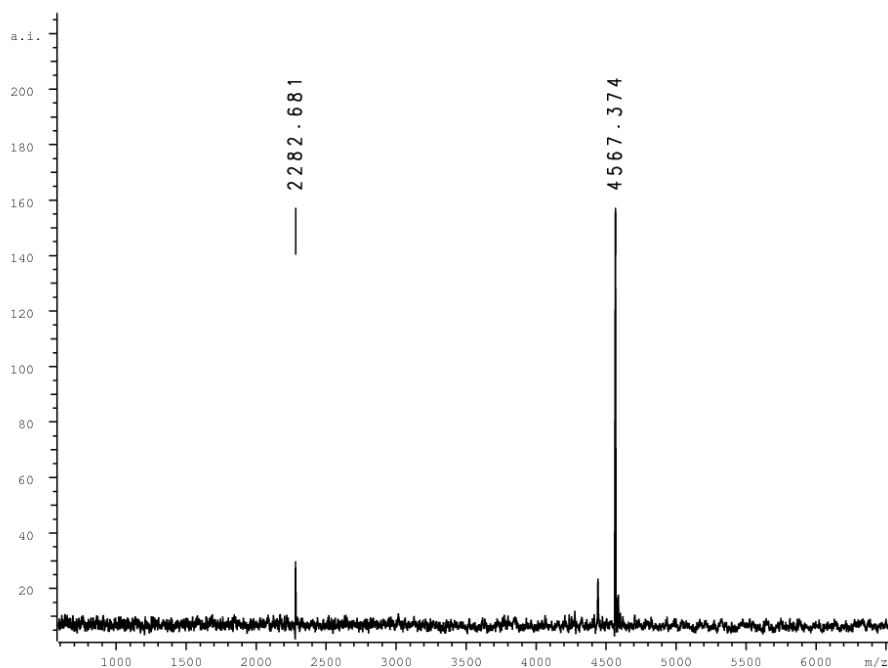
Table S1. MS (MALDI-TOF, negative mode or positive mode) of the 8 different adducts.

Compound	m/z	Molecular weight (g/mol)
ODN-1	4647	4648
P₁	5774	5773
P₂	10420	10421
P₃	15078	15069
P₄	19539 (broad)	19717
ODN-2	4567	4569
P_{1c}	5692	5693
P_{2c}	10257	10263
P_{3c}	14882 (broad)	14829
P_{4c}	19667 (broad)	19397

ODN-1: 5' GGA GCT GCA GTT CAU-propargyl 3'
MW= 4648 Da



ODN-2: 5' TGA-ACT-GCA-GCT-CCU-propargyl 3'
MW = 4569 Da



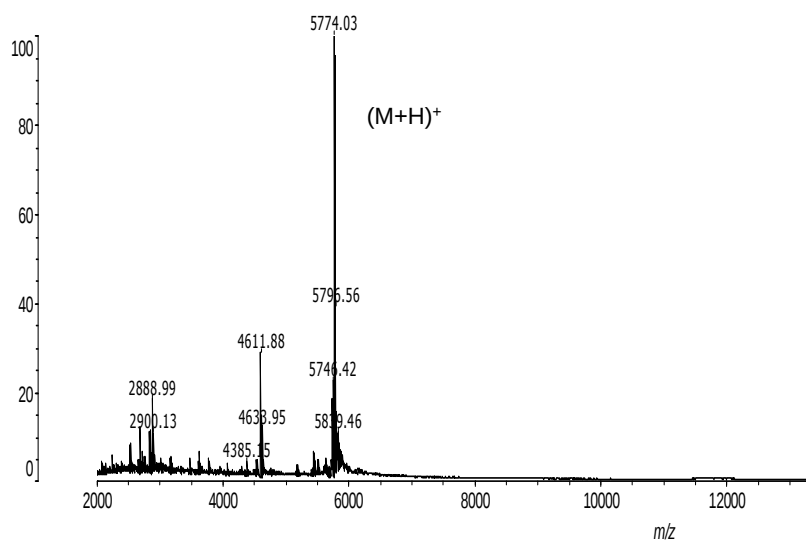
P₁: Cu-Porphyrin/one DNA
MW= 5773 Da

Performance

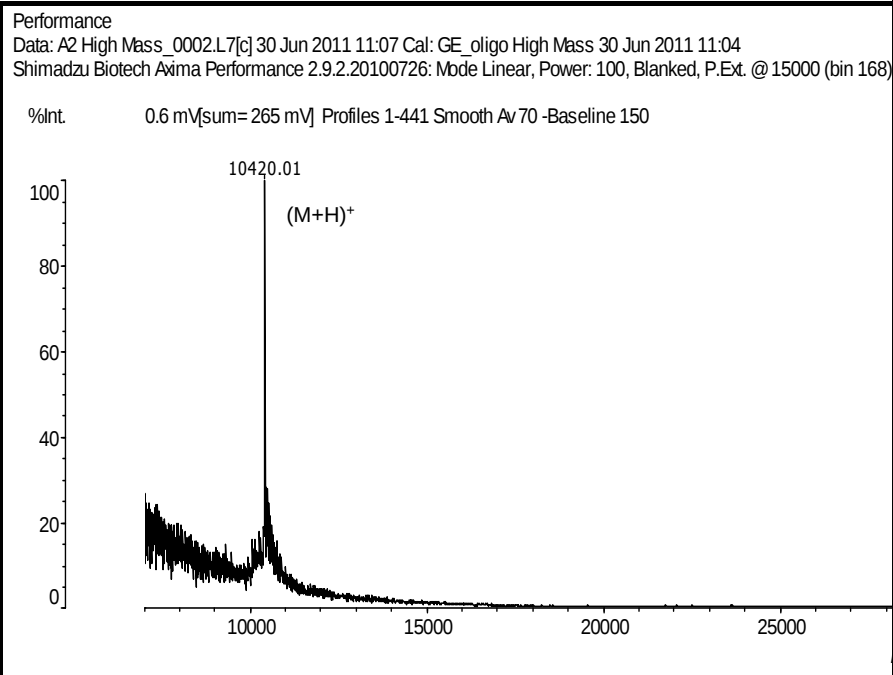
Data: A3 New_0001.K6[c] 30 Jun 2011 10:49 Cal: GE_oligo 30 Jun 2011 10:40

Shimadzu Biotech Avima Performance 2.9.2.20100726: Mode Linear, Power: 102, Blanked, P.Ext. @ 6000 (bin 106)

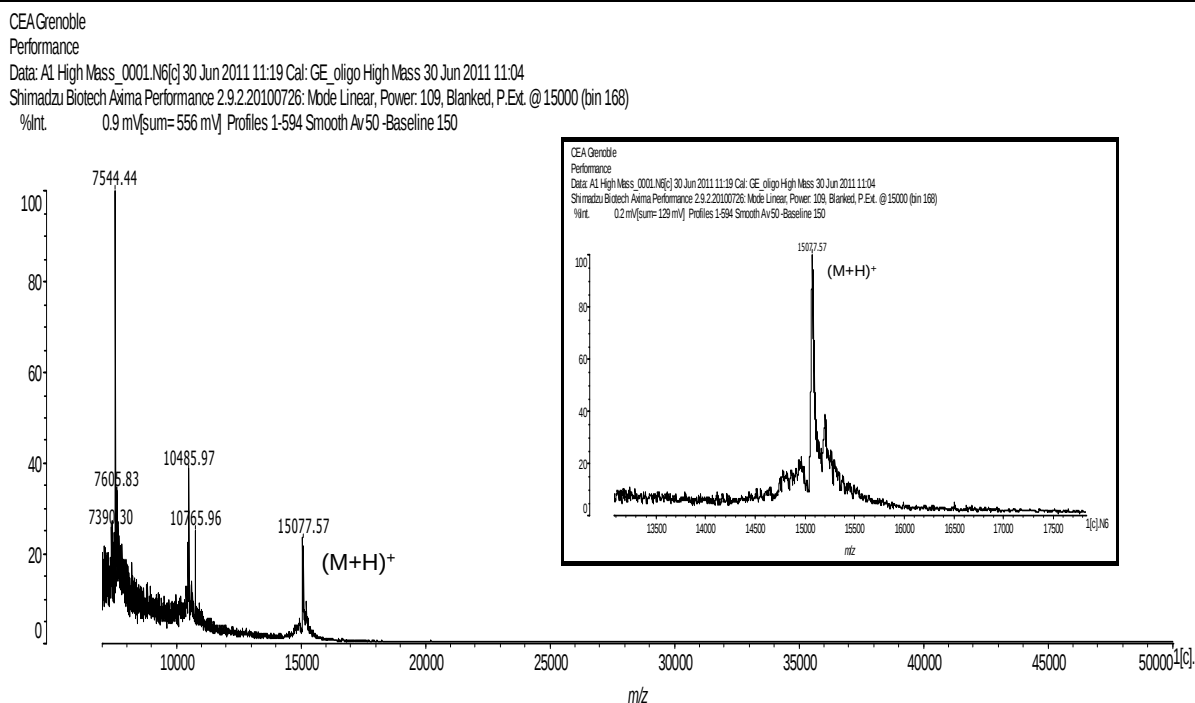
%Int. 49 mV[sum= 11568 mV] Profiles 1-238 Smooth Av100 -Baseline 150



P₂: Cu-Porphyrin/two DNA
MW= 10421 Da



P₃: Cu-Porphyrin/three DNA
MW= 15069 Da



P4: Cu-Porphyrin/four DNA
MW = 19717 Da

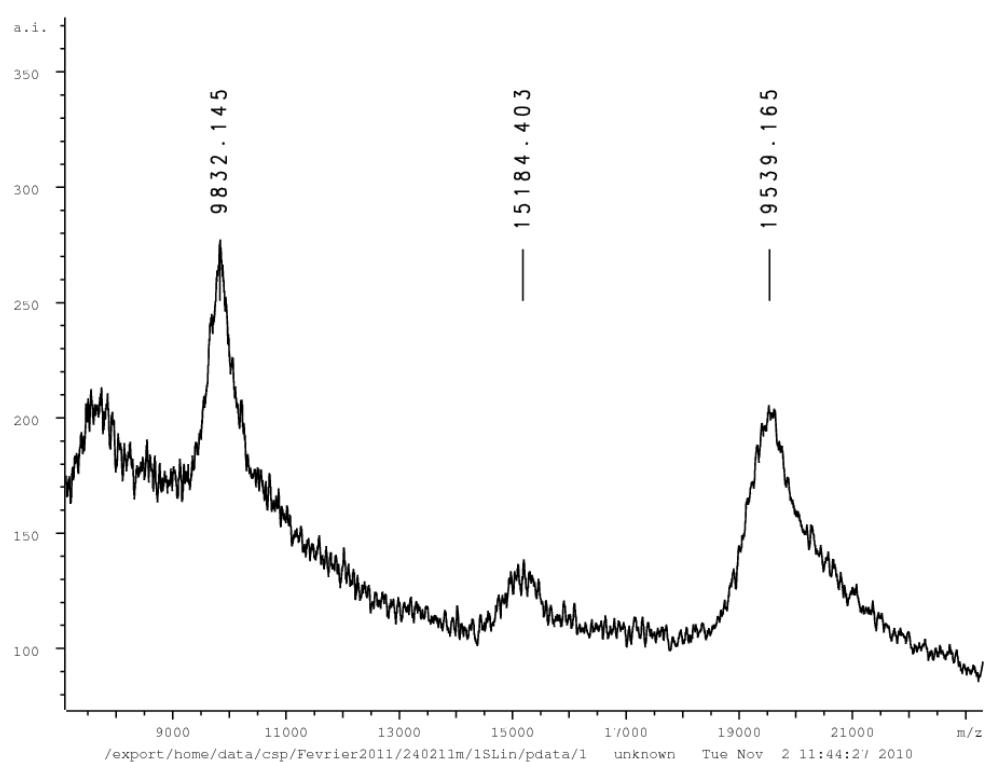


Fig. S1 mass spectra of **ODN-1**, **ODN-2** and **P₁**, **P₂**, **P₃** and **P₄**. Note that the high molecular weight of the porphyrin tetra-adduct **P₄** did not permit to observe a nicely resolved peak; only a broad signal was obtained.

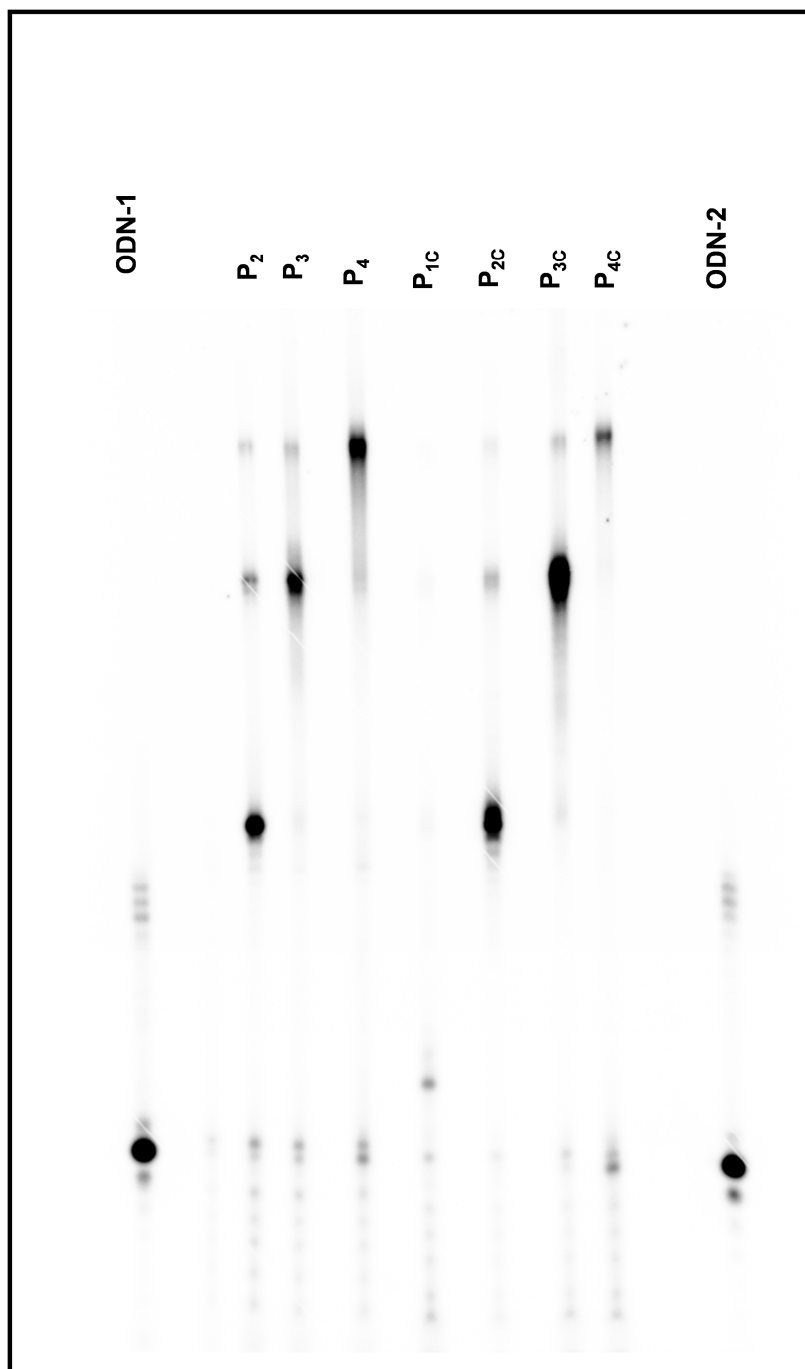


Fig. S2 denaturing PAGE analysis (15%, 7M urea) of the RP-HLPC purified DNA sequence **ODN-1**, **ODN-2** and porphyrin-DNA hybrids **P₂ to P₄** and **P_{1c} to P_{4c}**.