**Graphene-based nanomaterials modulate internal biofilm interactions and microbial diversity**

**Supplementary data**

Lauris Evariste1, Paul Braylé1, Florence Mouchet1, Jérôme Silvestre1, Laury Gauthier1, Emmanuel Flahaut2, Eric Pinelli1, Maialen Barret1

1Laboratoire d’écologie fonctionnelle et environnement, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France

2CIRIMAT, Université de Toulouse, CNRS, INPT, UPS, UMR CNRS-UPS-INP N°5085, Université Toulouse 3 Paul Sabatier, Bât. CIRIMAT, 118 route de Narbonne, 31062 Toulouse cedex 9, France



Figure S1: Growth rate curve of *N. palea* in control conditions over the experiment duration. Diatoms counting was carried out using flow cytometry. Results are presented as mean ± standard error of three replicates.



Figure S2: PCA of normalized AWCD data following 48 hours of exposure to GO (A) or rGO (B) and after 144 hours of exposure to GO (C) and rGO (D).



Figure S3: AWCD values measured for each guild of carbon sources after 48 hours (A) and 144 hours (B) of exposure to GBMs. ANOVA (*p* < 0.05) was followed by Tukey test. Asterisks indicate groups significantly different from the control group.

Figure S4: Relative abundance of bacterial Order from the phyla Bacteroidota (A) and Proteobacteria (B) following exposure to GBMs concentrations ranging from 0 to 10 mg/L.