SUPPORTING INFORMATION

Competitive Binding of Natural Amphiphiles with Graphene Derivatives

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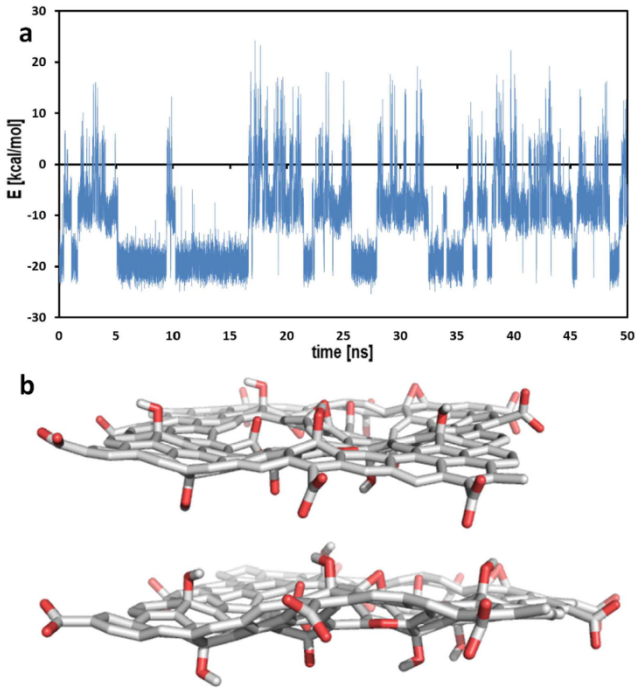

Figure S1. The high-energy normal mode of the graphene oxide nanosheet. The simulations were done with the nanosheet alone. (a) At T~0.67 kcal/mol·k_B, the fluctuation of the potential energy indicated excitation of a higher-energy normal mode. (b) The snapshots of the nanosheet in the high-energy state illustrated the twisted normal mode.

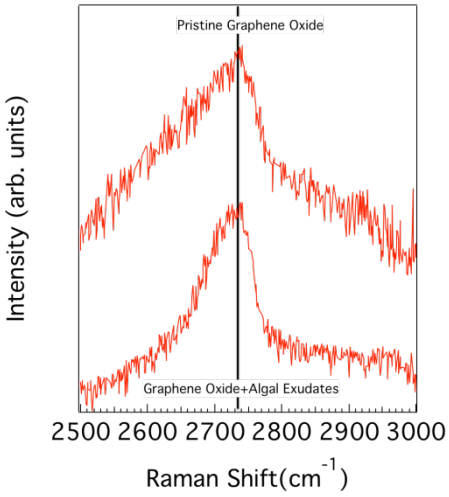

Figure S2. Raman spectra of graphene oxide before and after incubation with algal exudates. The absence of any shift in the 2D-band (~2730 cm^{-1}) suggests that the interaction between graphene oxide and exudates was weaker compared to graphene and exudates.

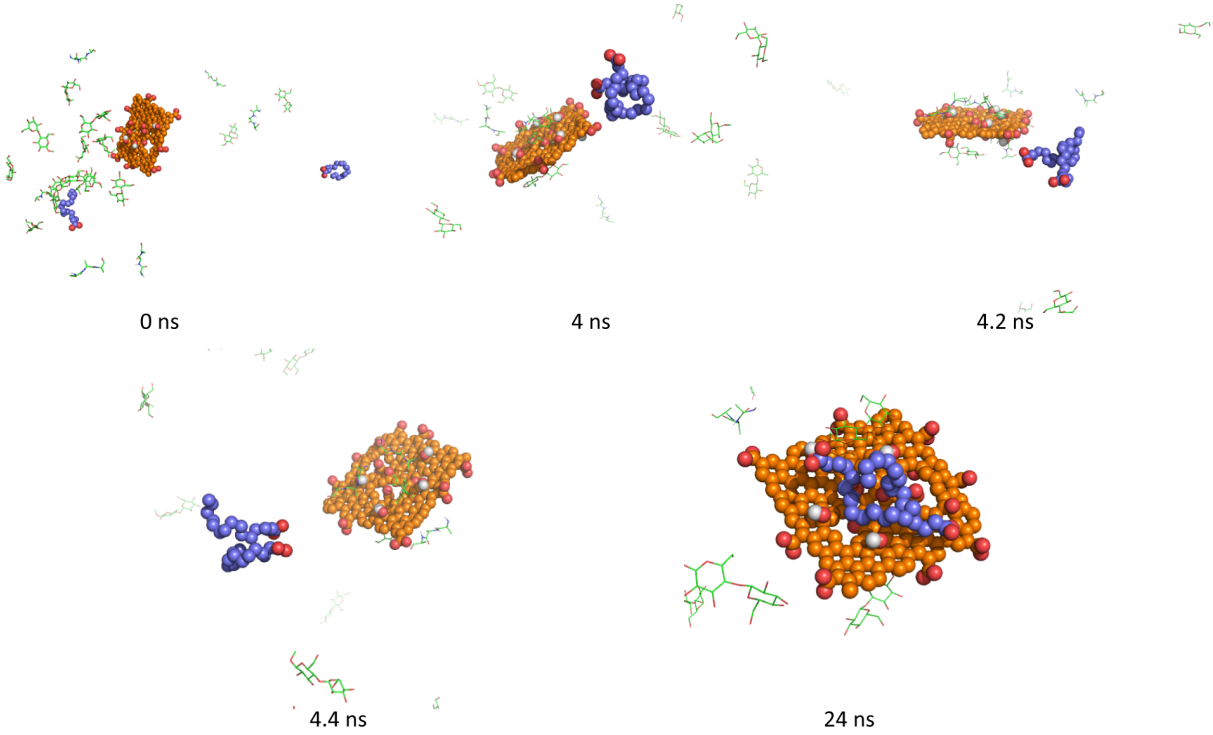

Figure S3. Palmitic acids (purple) were observed to bind to each other before their adsorption onto the nanosheet in one of the simulations.