

Supporting Information for
Conformational Interchange of Carbohydrate by Mechanical Compression at the Air-Water
Interface

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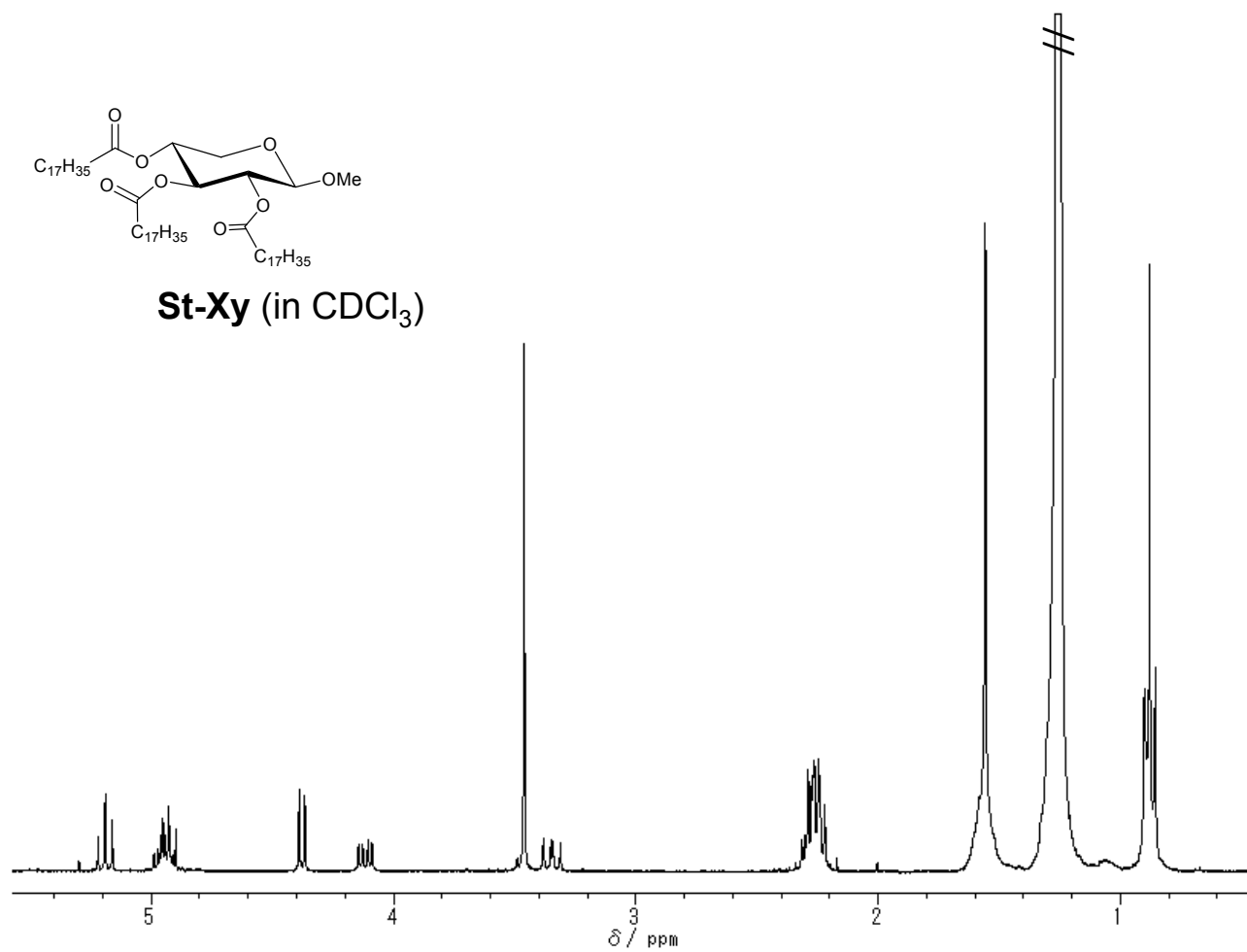
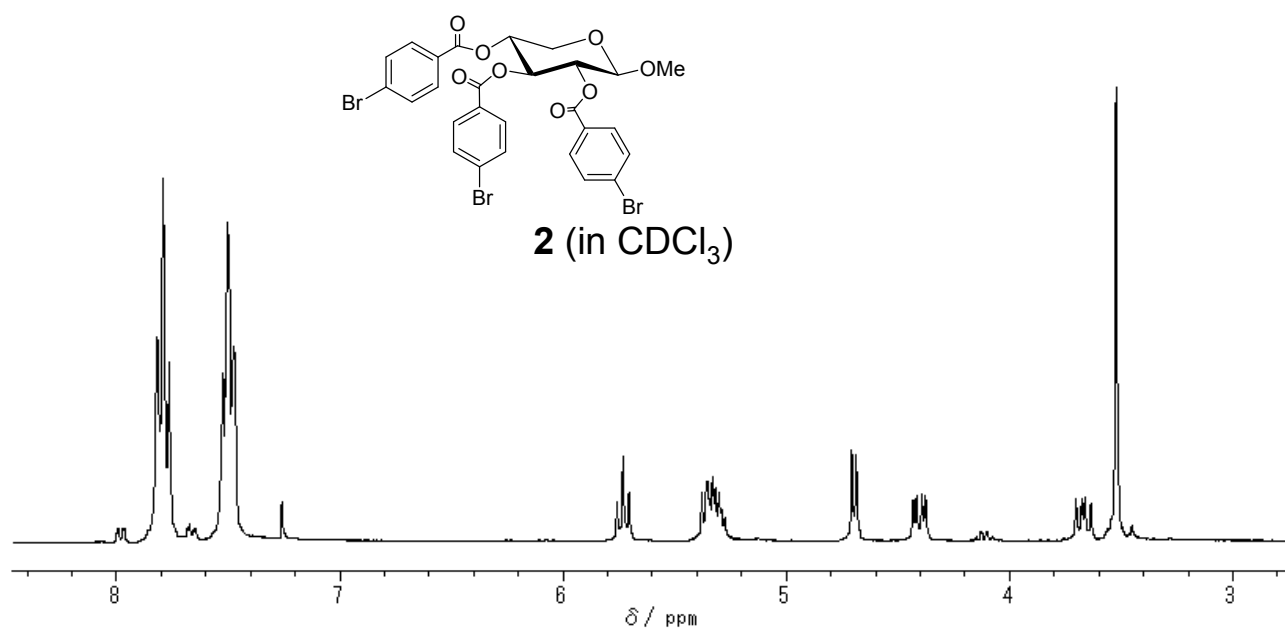
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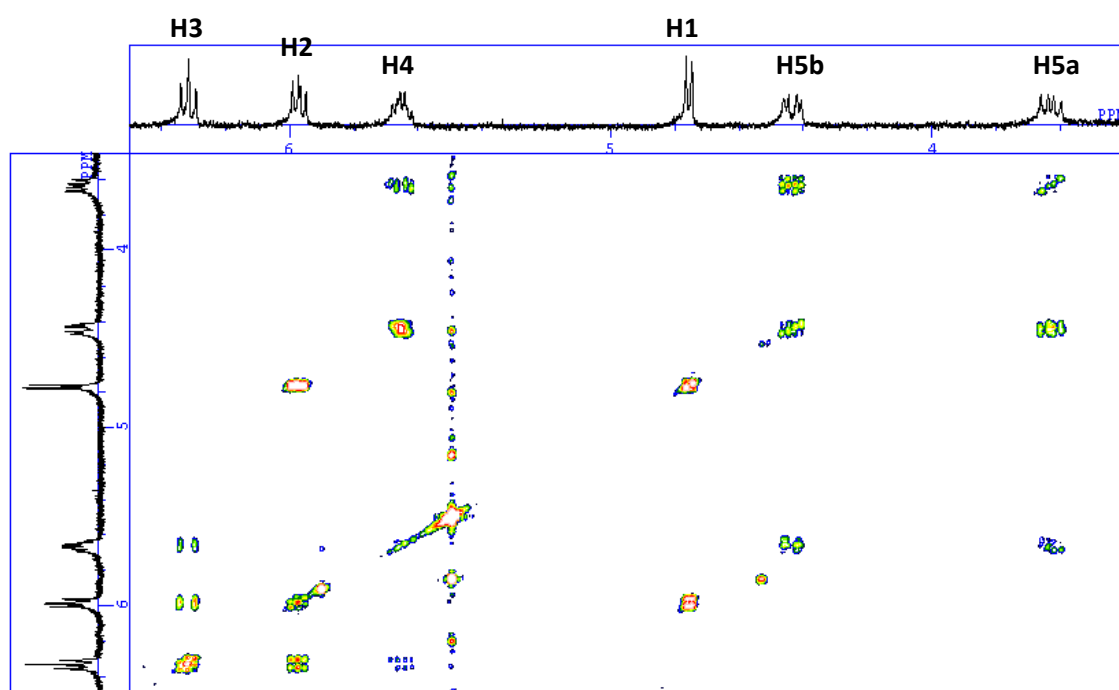
1. 1D and 2D ¹H-NMR spectra
2. Scheme S1 and Figure S1

1. ^1H -NMR spectra (300 MHz, rt)

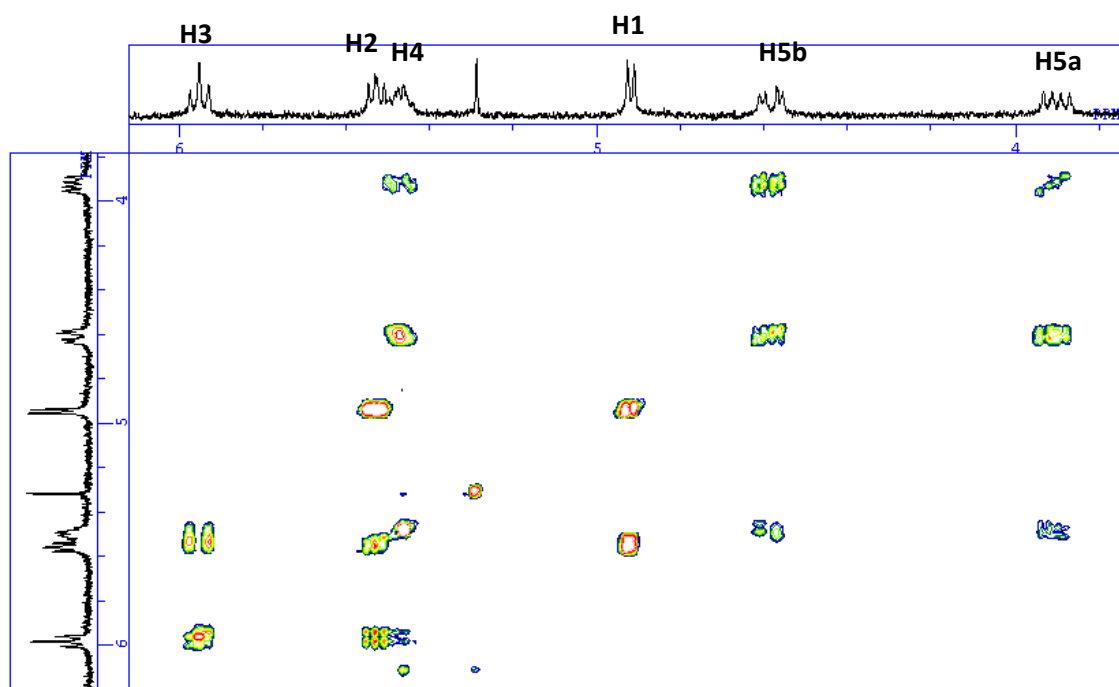


2D [^1H , ^1H] COSY NMR spectra of PyXy.

In C_6D_6 :

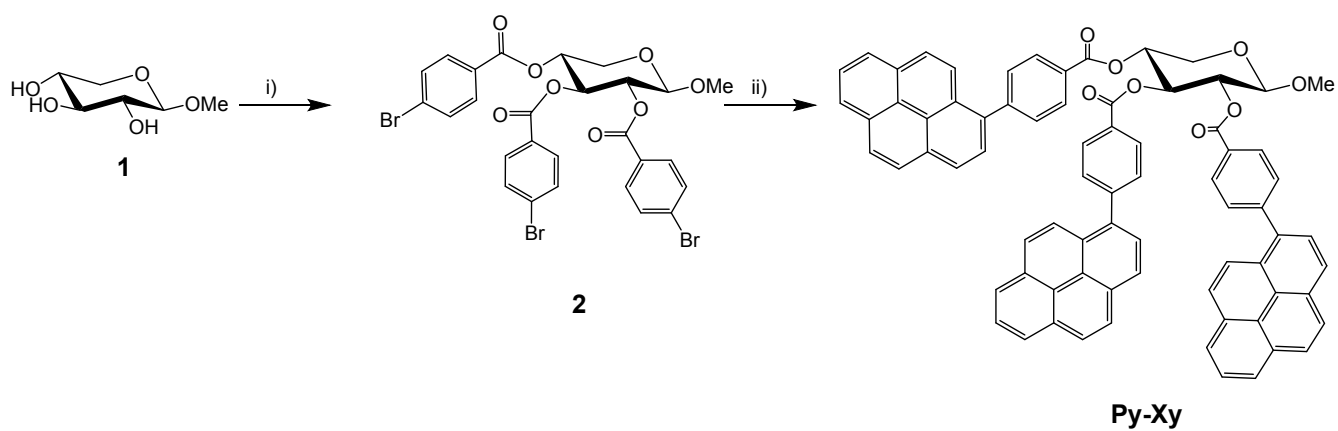


In CDCl_3 :



2. Supporting Figures.

Scheme S1. Synthetic summary. Two-step sequence leading to pyrene-labelled xylose (PyXy).



i) 4-bromobenzyl chloride, Et_3N , CH_2Cl_2 , rt, overnight.; ii) 1-pyreneboronic acid, $\text{Pd}(\text{PPh}_3)_4$, Na_2CO_3 , THF, reflux, 15 h.

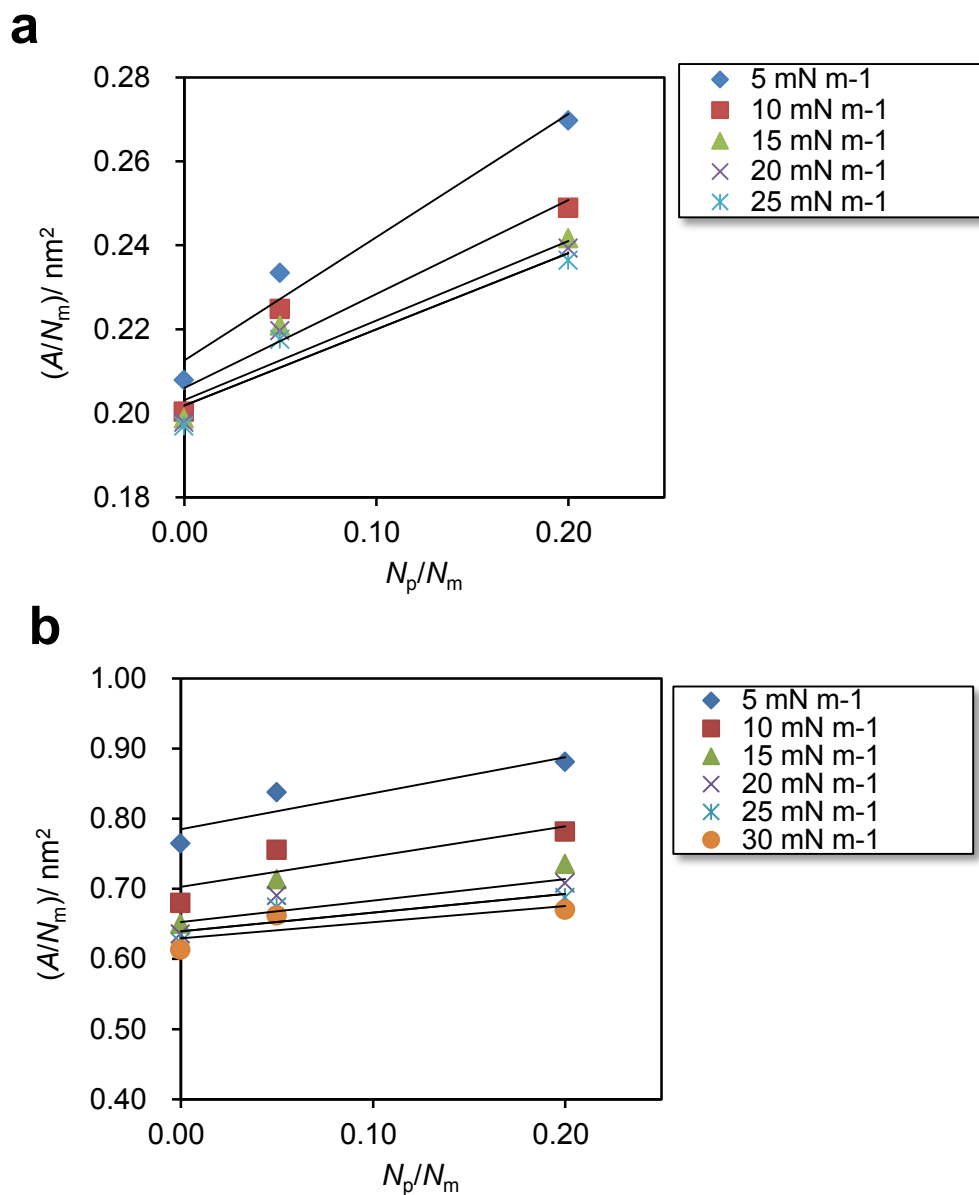


Figure S1. Plots of A/N_m vs. N_p/N_m obtained from Fig. 5 at 5 mN m⁻¹ intervals (see eq (4) in the experimental section. a: MS, b: StXy as a matrix lipid).