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Supplementary Information

On the Subtle Tuneability of Cellulose Hydrogels: Implications for Binding of Biomolecules Demonstrated for CBM 1

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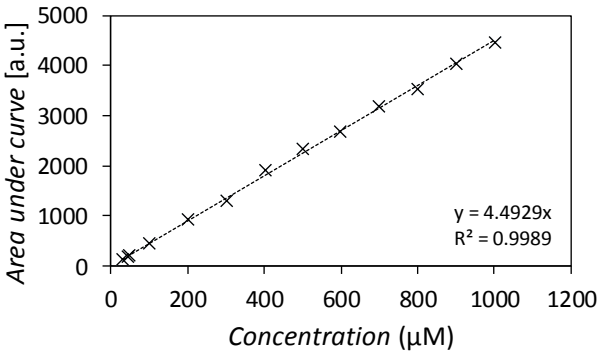

Figure S1. Methylene blue HPLC calibration curve.

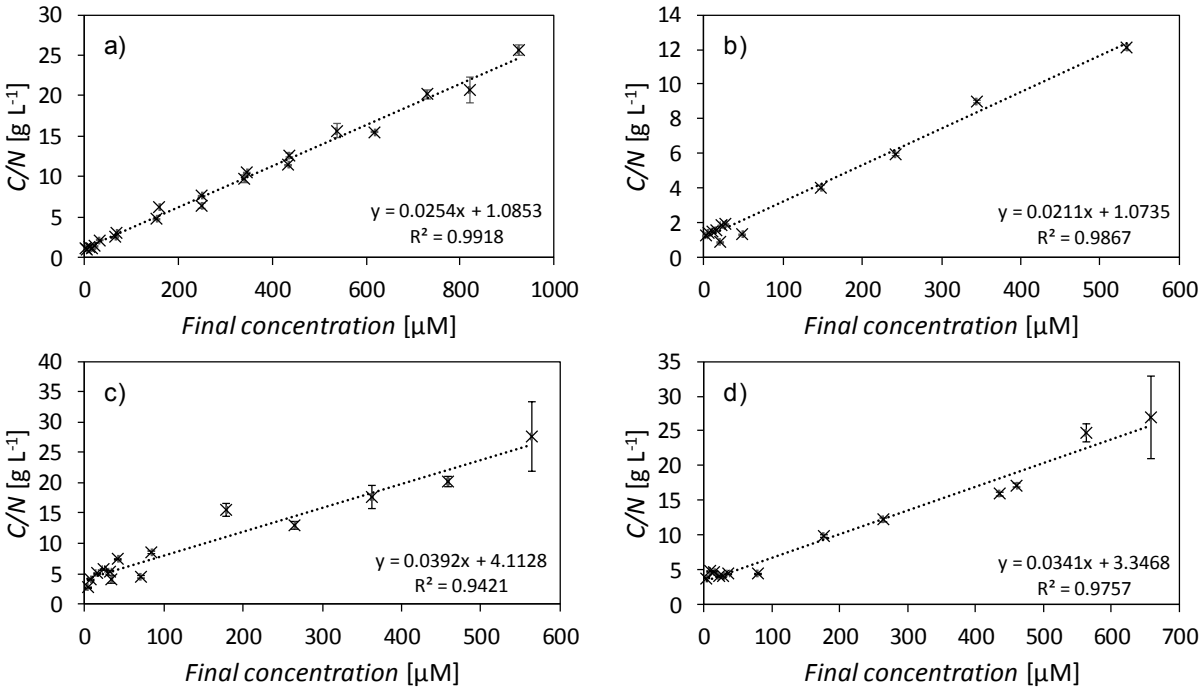

Figure S2. Plots to determine N_m and K for methylene blue adsorption isotherms on a) ACrM, b) ACrW, c) BCrM, d) BCrW hydrogels.

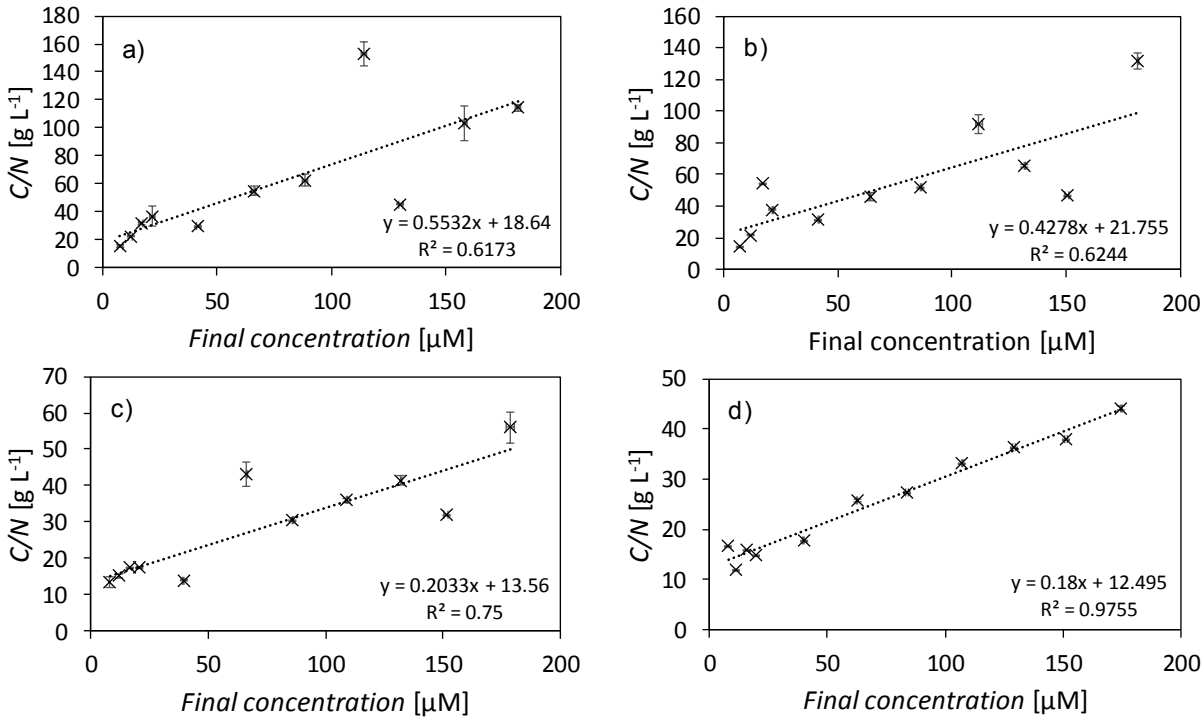

Figure S3. Plots to determine N_m and K for *Th*CBM$_{CBHI}$ adsorption isotherms on a) ACrM, b) ACrW, c) BCrM, d) BCrW hydrogels. While R^2 values for the lines of best fit are low in some cases, this reflects the experimental challenges associated with accurate estimation of the quantity of cellulose in "never-dried" hydrogels. Nonetheless, the lines of best fit reflect the trends in the data, which is complete, i.e. no apparently anomalous points have been removed.

Table S4. Number of moles of probe molecule per gram of cellulose required to form a monolayer, N_m, and curve constant, K, for methylene blue and *Th*CBM$_{CBHI}$ adsorption isotherms on hydrogels.

Sample	MB N_m [µmol g^{-1}]	MB K [µM^{-1}]	CBM N_m [µmol g^{-1}]	CBM K [µM^{-1}]
ACrM	39.4	0.023	1.8	0.030
ACrW	47.4	0.020	2.3	0.020
BCrM	25.5	0.010	4.9	0.015
BCrW	29.3	0.010	5.6	0.014

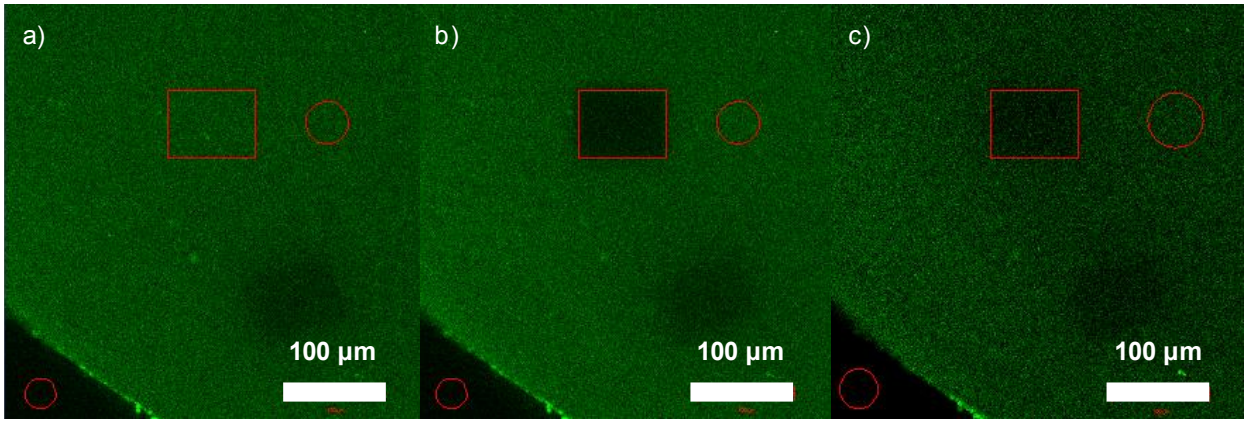

Figure S5. Bleaching of Alexa Fluor 488 tagged *Th*CBM$_{CBHI}$ on cellulose hydrogel a) before bleaching, b) immediately after bleaching, c) 33 minutes after bleaching