

Supporting Information

Table S4. Average Values^a of the Lattice Parameters of the Core Unit Cell^b of the MD Crystal Models.

Allomorph	Crystal model	<i>a</i> (nm)	<i>b</i> (nm)	<i>c</i> (nm)	α (deg.)	β (deg.)	γ (deg.)
cellulose I α	obsd.	0.672	0.596	1.040	118.1	114.8	80.4
		0.677 $\pm$ 0.025	0.601 $\pm$ 0.020	1.075 $\pm$ 0.024	120.1 $\pm$ 3.1	112.7 $\pm$ 3.0	81.1 $\pm$ 2.7
cellulose I β	obsd.	0.778	0.820	1.038	90.0	90.0	96.5
		0.762 $\pm$ 0.021	0.825 $\pm$ 0.019	1.077 $\pm$ 0.018	90.5 $\pm$ 1.8	90.3 $\pm$ 2.1	97.6 $\pm$ 2.4
cellulose II	obsd.	0.810	0.903	1.031	90.0	90.0	117.1
	A36	0.840 $\pm$ 0.023	0.883 $\pm$ 0.021	1.074 $\pm$ 0.018	90.5 $\pm$ 2.0	89.7 $\pm$ 2.0	118.0 $\pm$ 2.6
	B36-1	0.849 $\pm$ 0.022	0.879 $\pm$ 0.021	1.072 $\pm$ 0.018	89.8 $\pm$ 2.0	90.1 $\pm$ 2.0	118.2 $\pm$ 2.6
	B36-2	0.847 $\pm$ 0.023	0.878 $\pm$ 0.021	1.074 $\pm$ 0.018	89.6 $\pm$ 1.9	89.8 $\pm$ 2.0	118.4 $\pm$ 2.7
	obsd.	0.445	0.785	1.031	90.0	90.0	105.1
cellulose III _I	A48	0.446 $\pm$ 0.016	0.754 $\pm$ 0.025	1.074 $\pm$ 0.018	90.0 $\pm$ 1.9	89.9 $\pm$ 2.2	93.6 $\pm$ 3.3
	B48	0.446 $\pm$ 0.018	0.755 $\pm$ 0.027	1.074 $\pm$ 0.023	90.1 $\pm$ 2.3	89.9 $\pm$ 2.6	93.4 $\pm$ 3.5

^a The values were averaged from the final 5 ns trajectories.

^b The innermost unit cell in the crystal model.