Mass ratio			Mole ratio		
Water	[C <sub>2</sub> mim][OAc]	Starch	Water	[C <sub>2</sub> mim][OAc]	Starch –OH
10	0	1	100.77	0	2.91
9	1	1	90.83	1	2.91
7	3	1	23.65	1	0.97
5	5	1	10.21	1	0.58

**Table S1** The formulations, in mass and in mole, used in the experimental work



Fig. S1 SAXS patterns and their fit curves of the starch samples at 28 °C in pure water.



**Fig. S2** Linear correlation function of the starch in pure water at 28 °C. *d* and  $d_a$  are the thicknesses of the semicrystalline lamellae and of the crystalline lamellae, respectively.