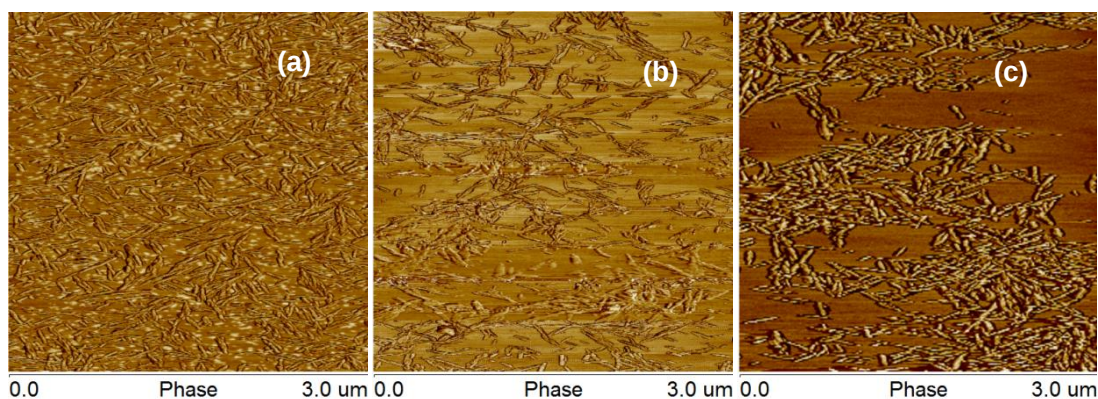


Table S1. Surface carbon atoms proportions obtained from the deconvolution of the C1s peak from XPS analysis.

	C1 C–C/C–H (%)	C2 C–O (%)	C3 O–C–O (%)	C4 O–C=O (%)	Atomic O/C ratios
Bonding Energy (eV)	285.0	286.6	288.0	289.0	
FDCNCs	3.66	77.93	15.97	2.44	0.72
SECNCs	7.39	74.24	13.50	4.87	0.67
FDCNC-g-PCL	31.37	47.40	18.46	5.85	0.62
SECNC-g-PCL	41.89	37.22	7.14	13.75	0.49

Table S2. Thermal data for the cellulosic samples before and after esterification with PCL as obtained from the TGA plots.

	T ₁ (°C)	T _{max} (°C)	Residue (%)
Cotton linters ^a	203	342	6.04
CNCs	110	224	27.09
FDNCCs	179	271	29.35
SECNCs	228	289	35.91
FDCNC-g-PCL	181	278	18.99
SECNC-g-PCL	187	280	18.52
Homo-PCL	254	391	0
a: TG and DTG curves are not shown			



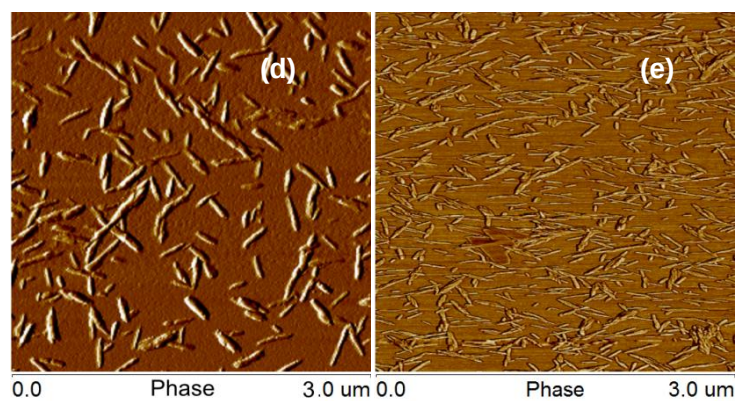


Figure S1. AFM phase images of cellulosic materials (a: CNCs in water; b: SECNC; c: FDCNC; d SECNC-g-PCL; e: FDCNC-g-PCL).