

## Supporting Information

### Preparation and Properties of Cellulose-based Films Regenerated from Waste Corrugated Cardboard using [Amim]Cl/CaCl<sub>2</sub>

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## Supporting information content

**Figure S1.** Polarizing micrographs of the P-WCC in [Amim]Cl at 90 °C after 0 min (a), 10 min (b), 40 min (c).

**Figure S2.** XRD spectrum of P-WCC (a) and BM-P-WCC (b).

**Figure S3.**  $^1\text{H}$  NMR spectra of [Amim]Cl (a) and recovered [Amim]Cl (b). (Photograph courtesy of 'Mingzi Xu'. Copyright 2020. The graphic is free domain)

**Figure S4.** FTIR spectra of [Amim]Cl (a) and recovered [Amim]Cl (b).

**Figure S5.** Surface roughness of the R-WCC film.

**Figure S6.** Transmittance (a) and visual pattern (b) of the R-WCC film.

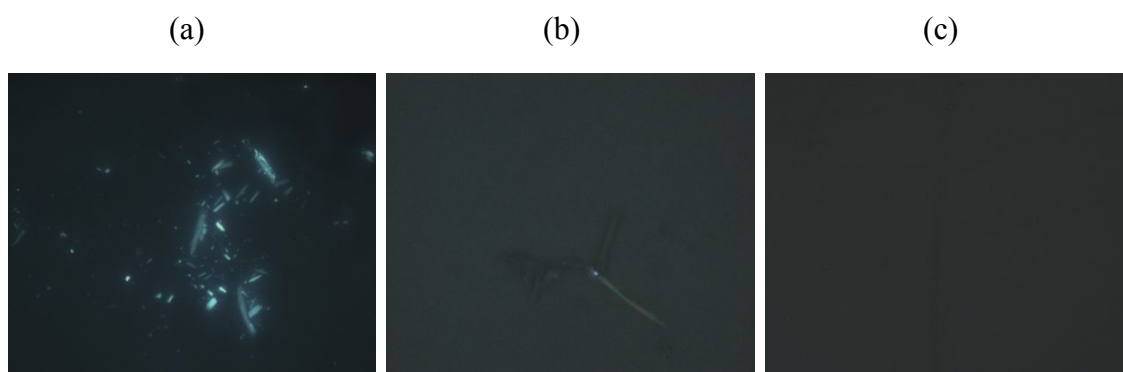


Figure S1. Polarizing micrographs of the P-WCC in [Amim]Cl at 90 °C after 0 min (a), 10 min (b), 40 min (c).

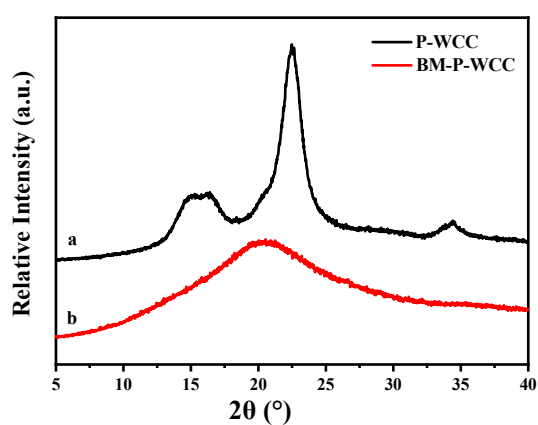


Figure S2. XRD spectrum of P-WCC (a) and BM- P-WCC (b).

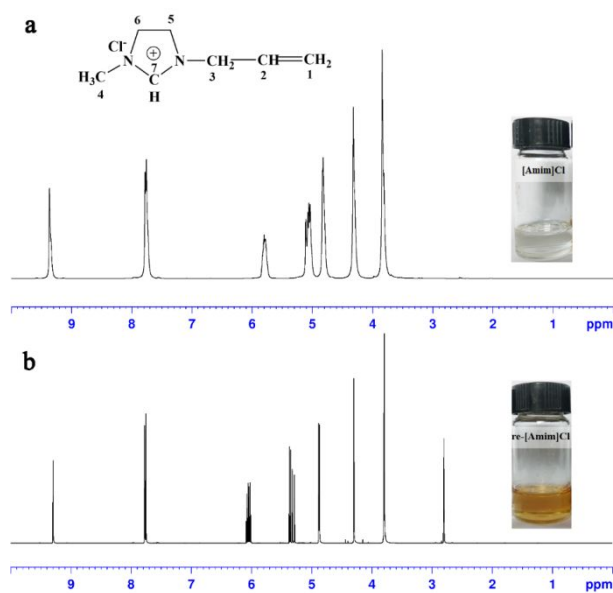


Figure S3. <sup>1</sup>H NMR spectra of [Amim]Cl (a) and recovered [Amim]Cl (b). (Photograph courtesy of 'Mingzi Xu'. Copyright 2020. The graphic is free domain)

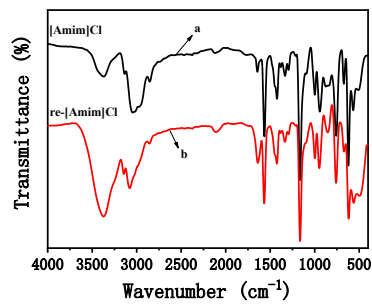


Figure S4. FTIR spectra of [Amim]Cl (a) and recovered [Amim]Cl (b).

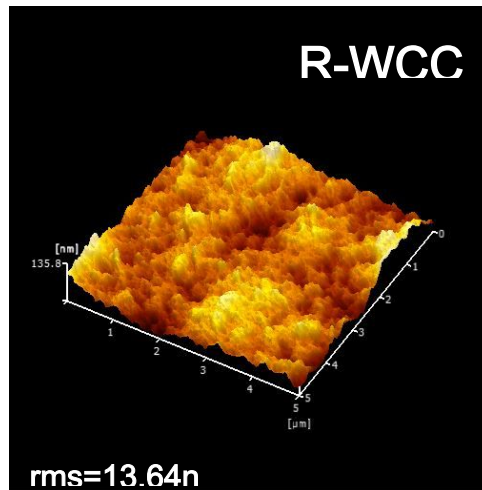


Figure S5. Surface roughness of the R-WCC film.

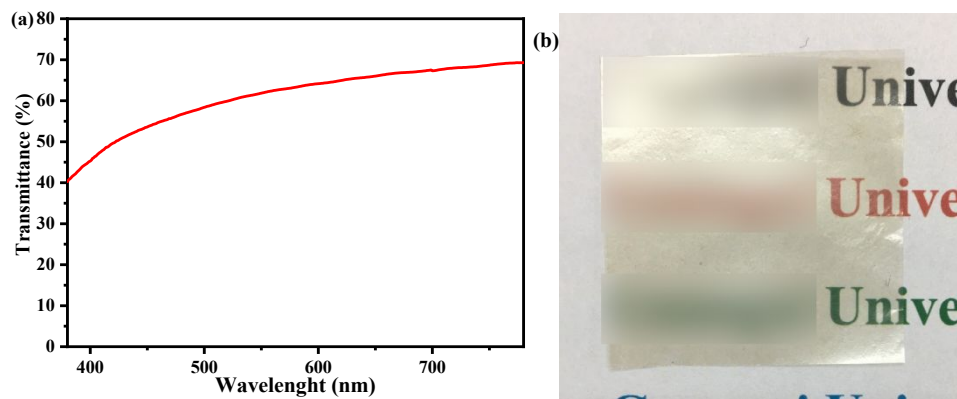


Figure S6. Transmittance (a) and visual pattern (b) of the R-WCC film.