

## Supplementary Materials

### Recyclable and mendable cellulose-reinforced composites crosslinked with Diels-Alder adducts

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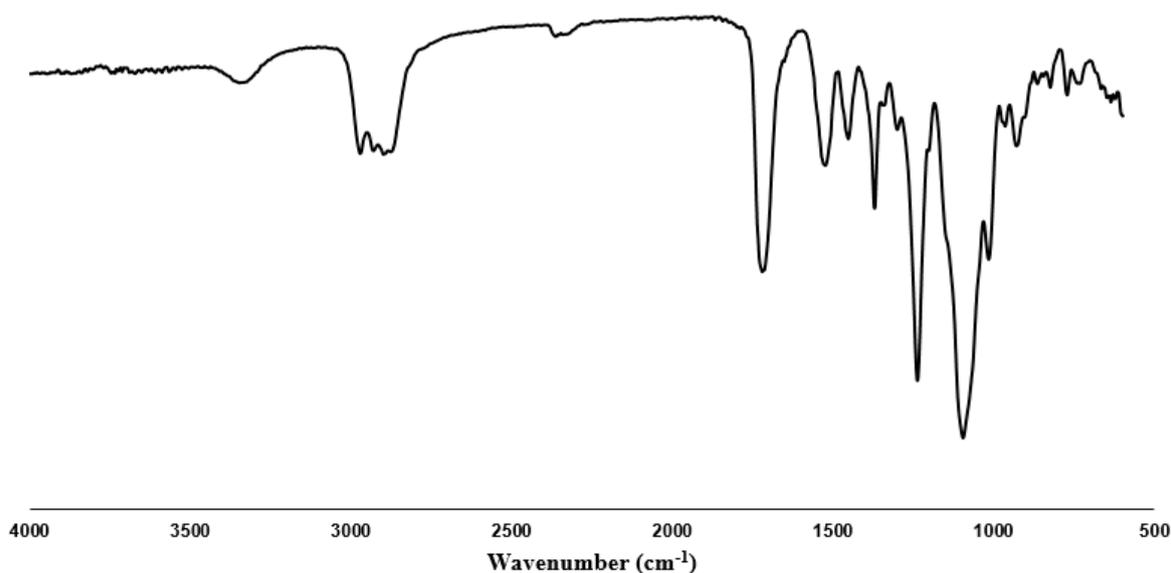
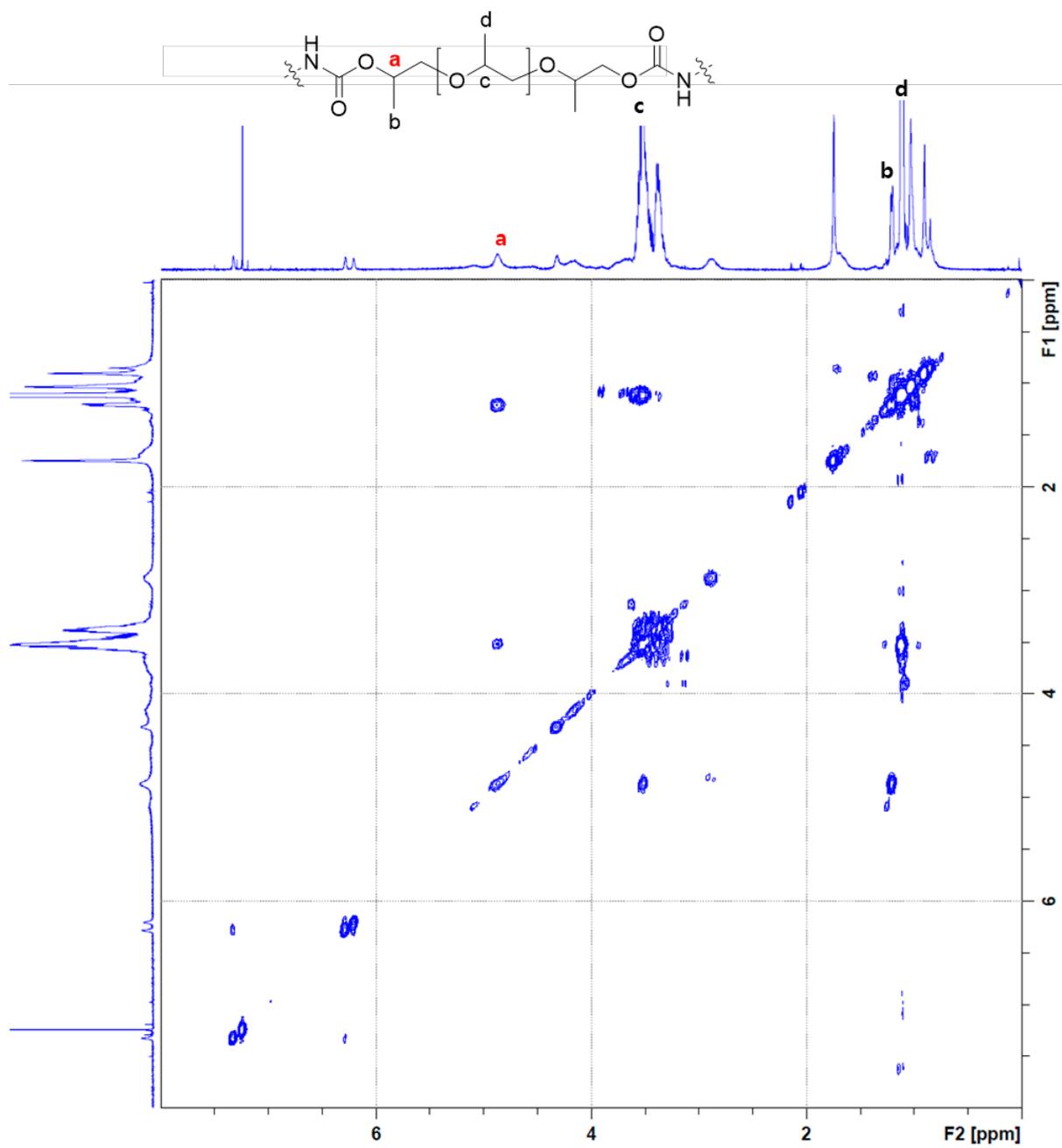
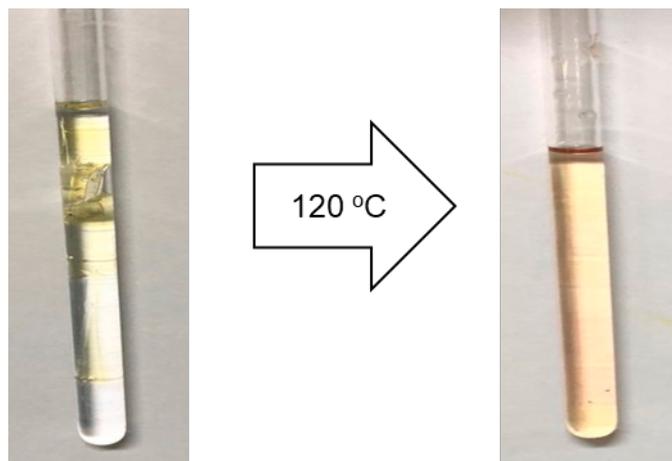


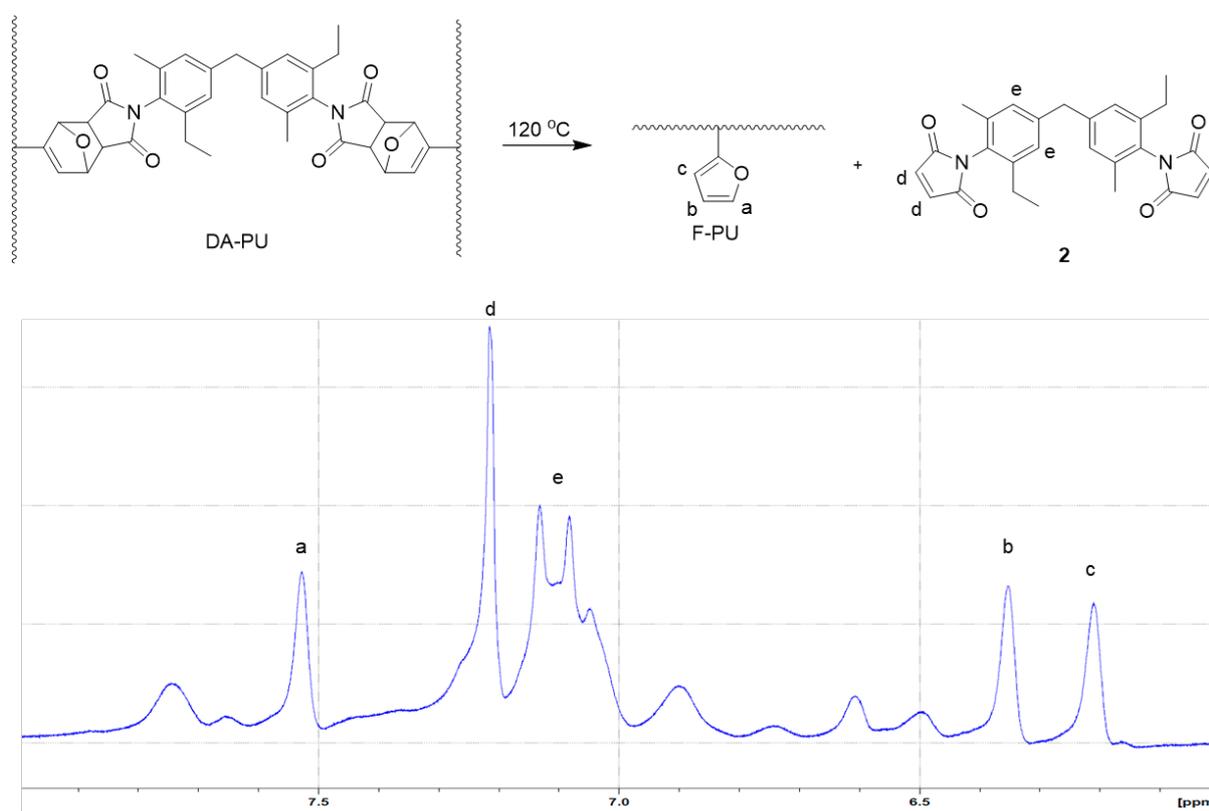
Figure S1. FTIR spectrum of F-PU.



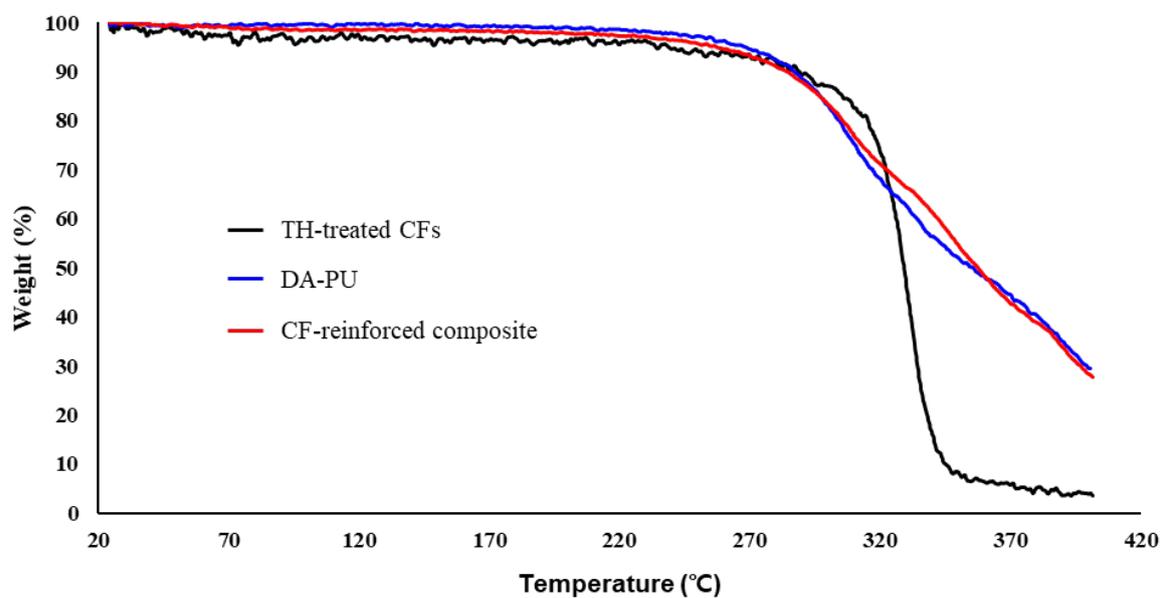
**Figure S2.** 2D COSY NMR of polymer F-PU. There was a correlation between the proton (a) next to the urethane bond and the protons (b) on the methyl group.



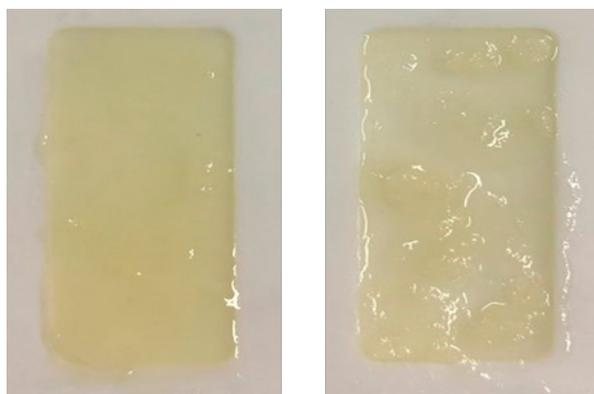
**Figure S3.** DA-PU in the NMR tube (left) before and (right) after being heated at 120 °C for 20 minutes.



**Figure S4.** <sup>1</sup>H-NMR spectrum of DA-PU in DMSO-*d*<sub>6</sub> ranging from 6.0 ppm to 8.0 ppm after heat treatment.



**Figure S5.** TGA graphs over temperature for (a) TH-treated CFs, (b) DA-PU and (c) the CF-reinforced composite.



**Figure S6.** CF-reinforced polymer composites with a CF content of 5 wt%. The composites were prepared using (left) the TH-treated CFs and (right) the pristine CFs.