

Electronic Supplementary Material (ESI) for RSC Advances.  
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**Waterborne polyurethane conjugated with novel diol chain-extender bearing cyclic phosphoramidate lateral group: synthesis, flammability and thermal degradation mechanism**

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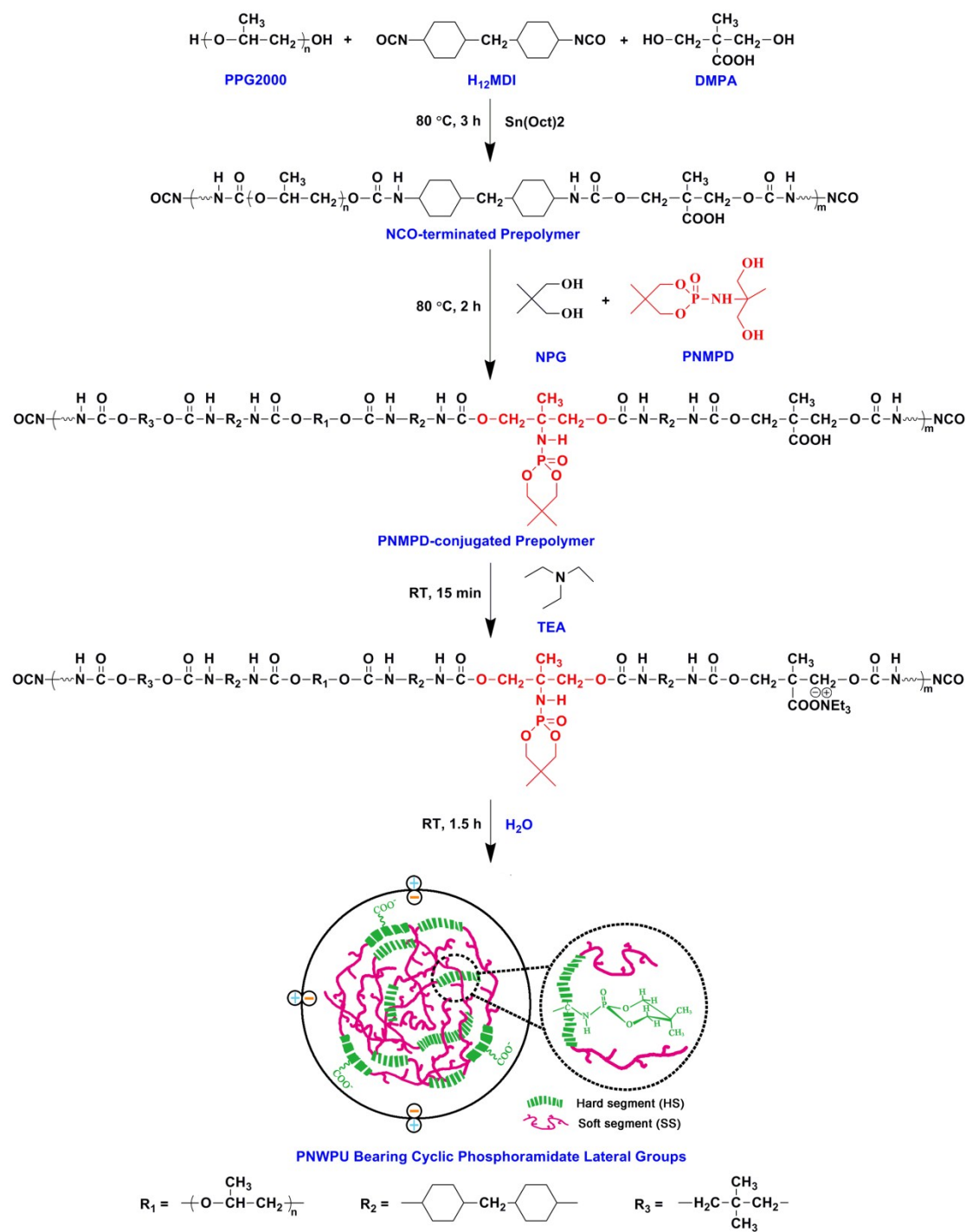


Fig.S1 Flowchart of the reaction process of PNWPU dispersions.

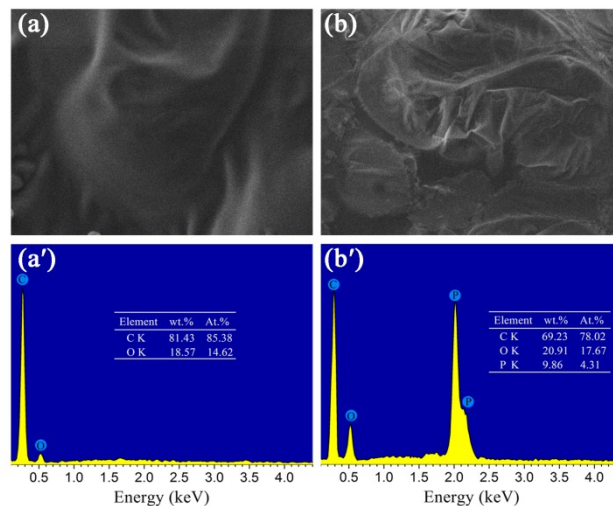


Fig.S2 EDX spectra of WPU (a) and PNWPU-12 (b) char residue after CC test.

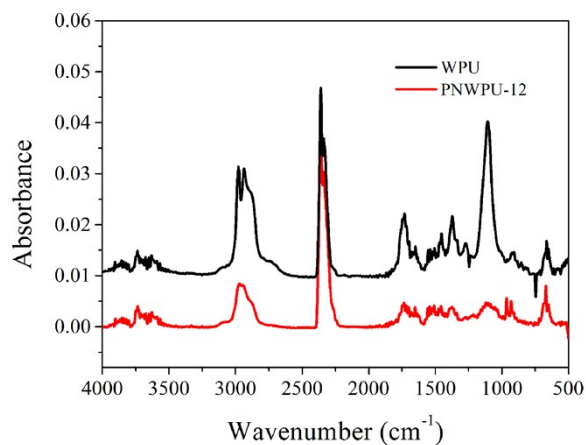


Fig.S3 FTIR spectra of pyrolysis gaseous products of WPU and PNWPU-12 at maximum degradation rate.

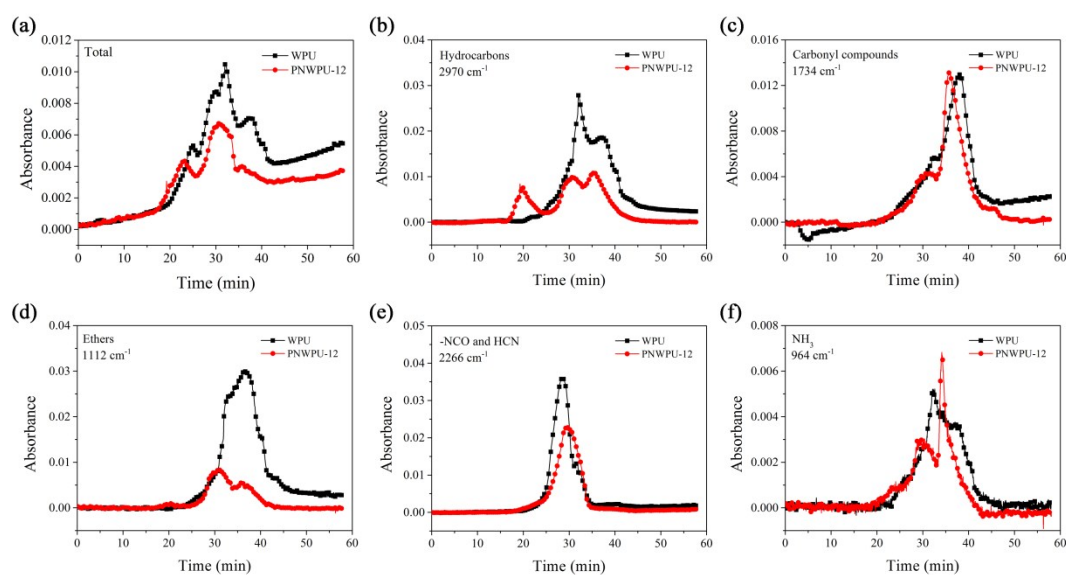


Fig.S4 Absorbance of selected pyrolysis products vs. time for WPU and PNWPU-12.

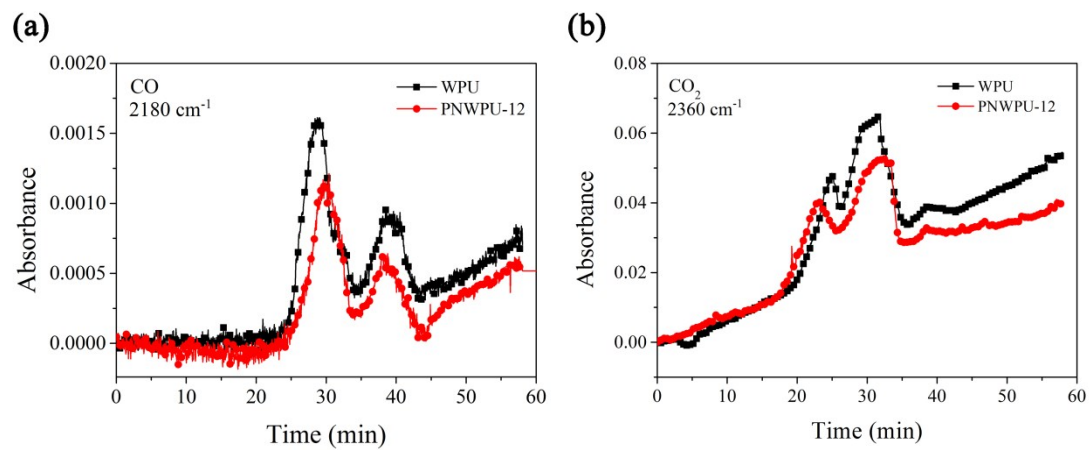


Fig.S5 Absorbance of CO (a) and CO<sub>2</sub> (b) vs. time for WPU and PNWPU-12.