

## Supporting Information (SI)

### A highly efficient chemical approach to producing green phosphorylated cellulosic macromolecules

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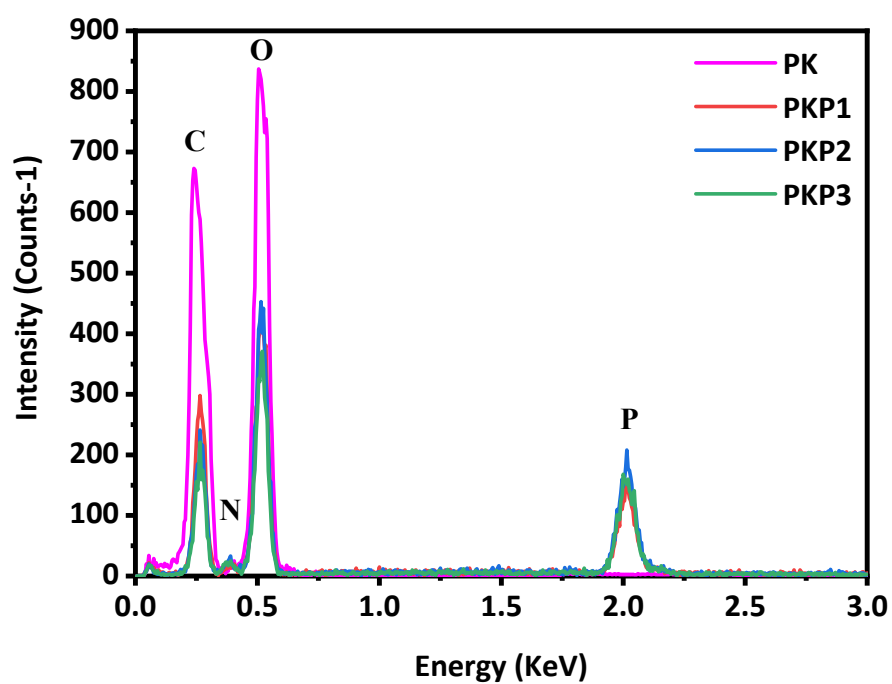
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## Elemental analysis

Phosphorus total content was measured using Inductively coupled plasma optical-emission spectroscopy (ICP-OES). PKP Samples were digested using nitric acid in a closed Teflon vessel. The nitrogen amount was measured according Lou et al<sup>1</sup>. At least two measurements were done for each sample.



**Fig.S1.** EDX survey scan spectrum of unmodified and phosphorylated cellulosic fibers samples.

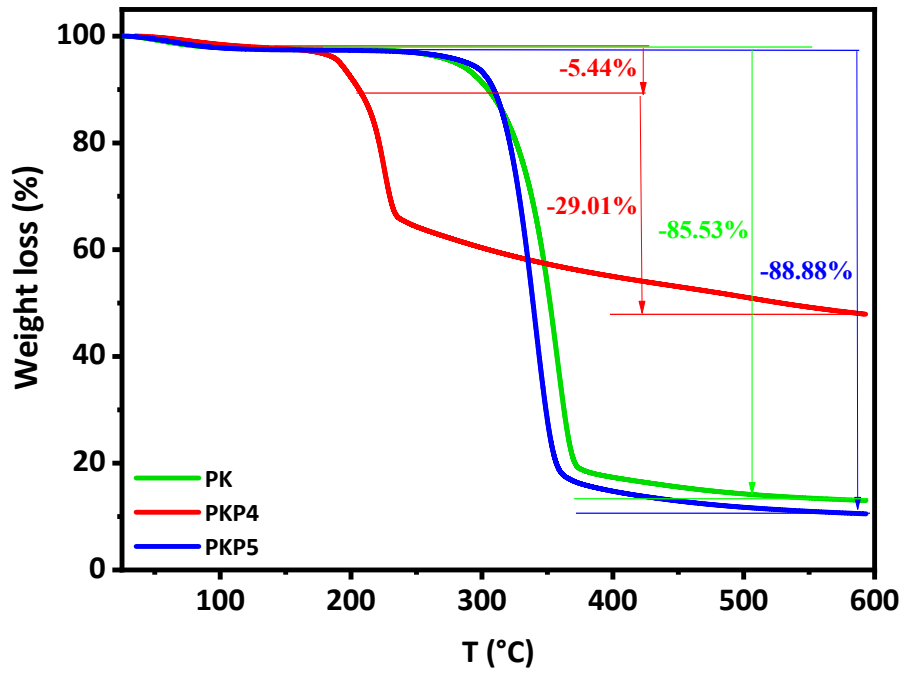


Fig.S2. TG curves of untreated (PK) and treated cellulose fibers (PKP4 and PKP5).

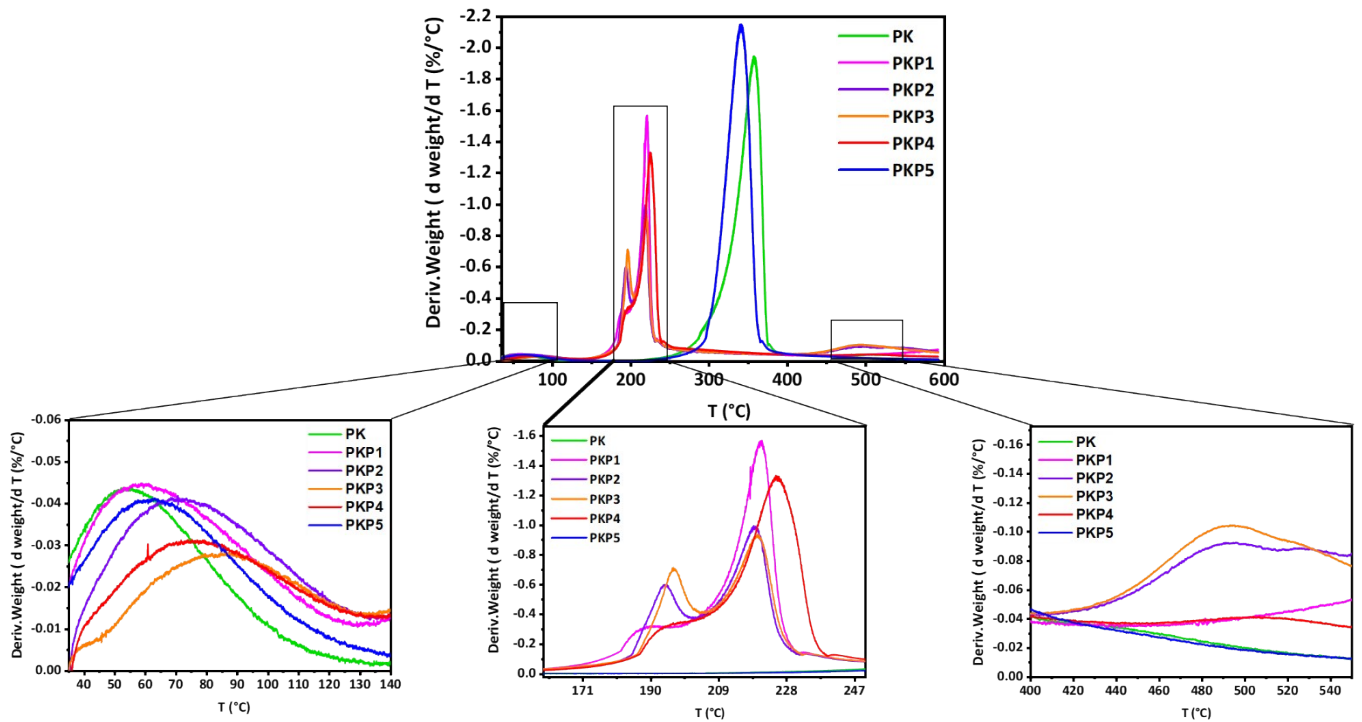


Fig.S3. DTG curves of untreated (PK) and treated cellulose fibers (PKP1, PKP2, PKP3, PKP4 and PKP5).

## References

- 1 J. Lou, J. Zhang, S. Xu, D. Wang and X. Fan, *Processes*, 2021, **9**, 767.