

Electronic Supplementary Information (ESI)

Chemical Induces Microstructural Transformation of Pulp Fibre to Colloidal Cellulose for Sustainable Plant Protection

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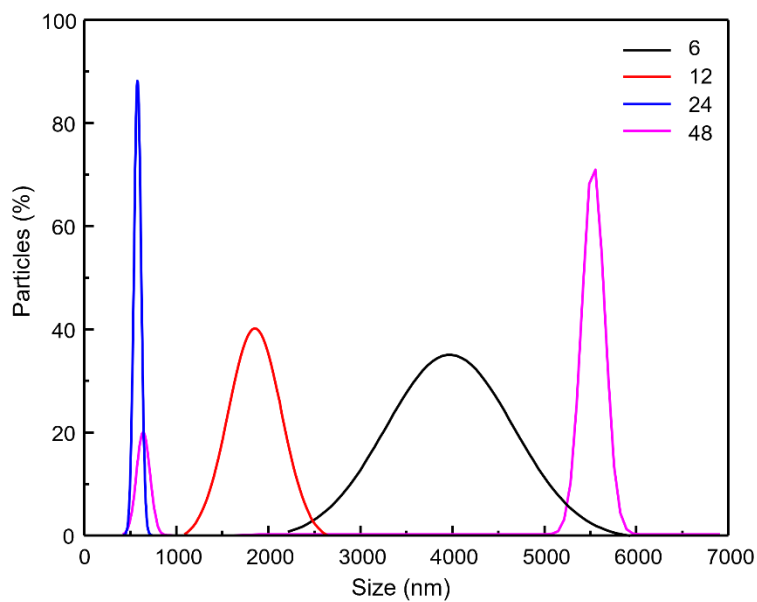


Fig S1 The particle size distribution of colloidal cellulose, subjected to varying acidic treatment durations of 6, 12, 24, and 48 hours, was determined using DLS analysis.

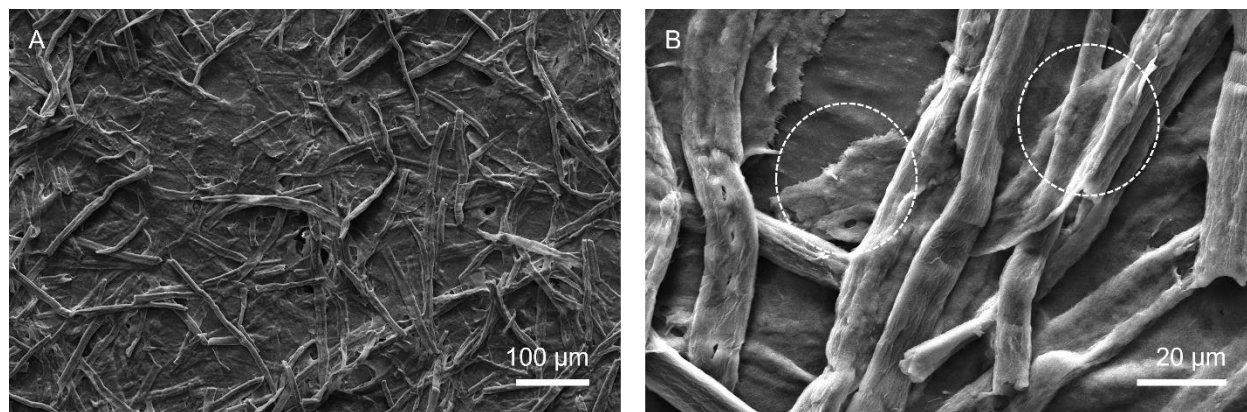


Fig S2 FE-SEM images illustrating the pulp fibre structure following 48 hours of acidic treatment at magnifications of 500x (A) and 3000x (B). The dashed circle highlights the accumulated particles.

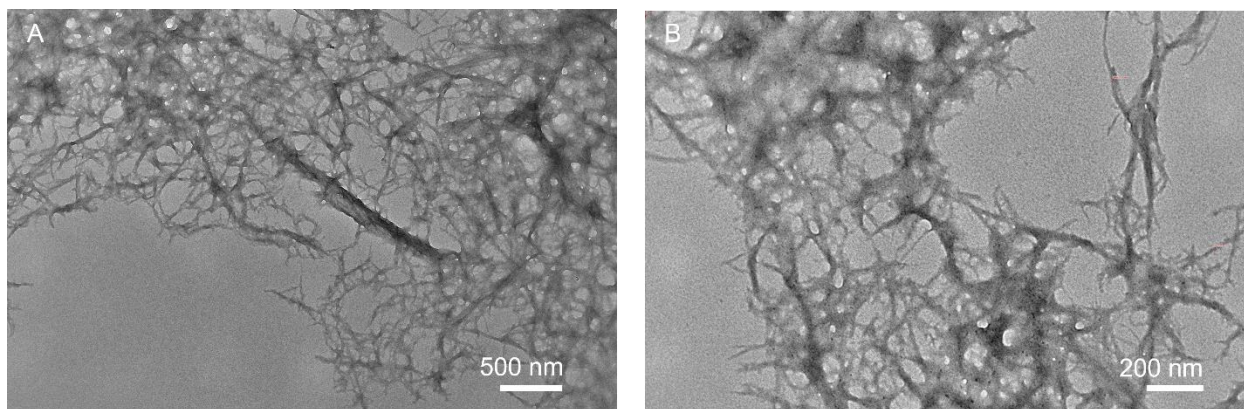


Fig S3 TEM images depicting the pulp fibre structure after 24 hours of acidic treatment at magnifications of 10,000x (A) and 20,000x (B).

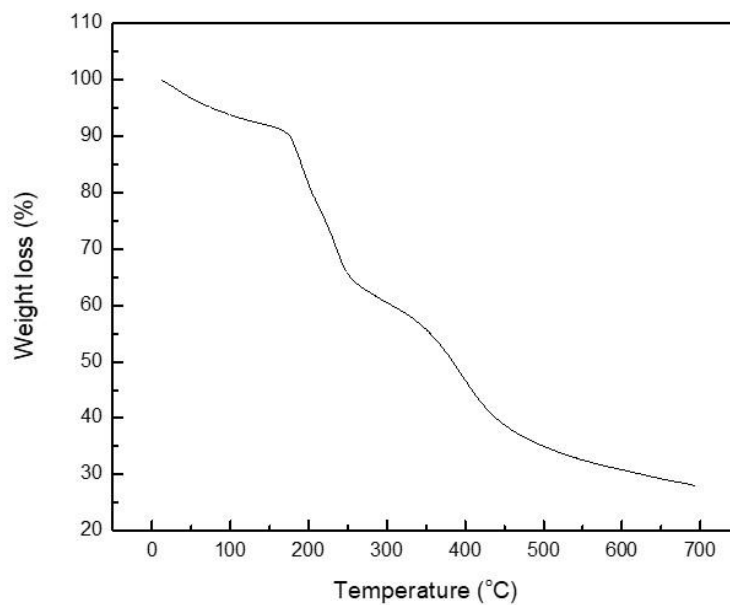


Fig S4 TGA profile of the cellulose film, illustrating its thermal stability and decomposition behavior.