

Electronic Supplementary information

Super water absorbing and shape memory nanocellulose aerogels from TEMPO-oxidized cellulose nanofibrils via cyclic freezing-thawing

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Figure S1. 0.5 CNF aerogel (8.1 mg/cm^3) from freezing at -20°C could be cut into various shapes (thin disc, square, trapezoid and wedges) by a sharp razor without appreciable deformation.



Figure S2. 3 FT CNF hydrogel could be handled while withholding 86 times of its own weight.

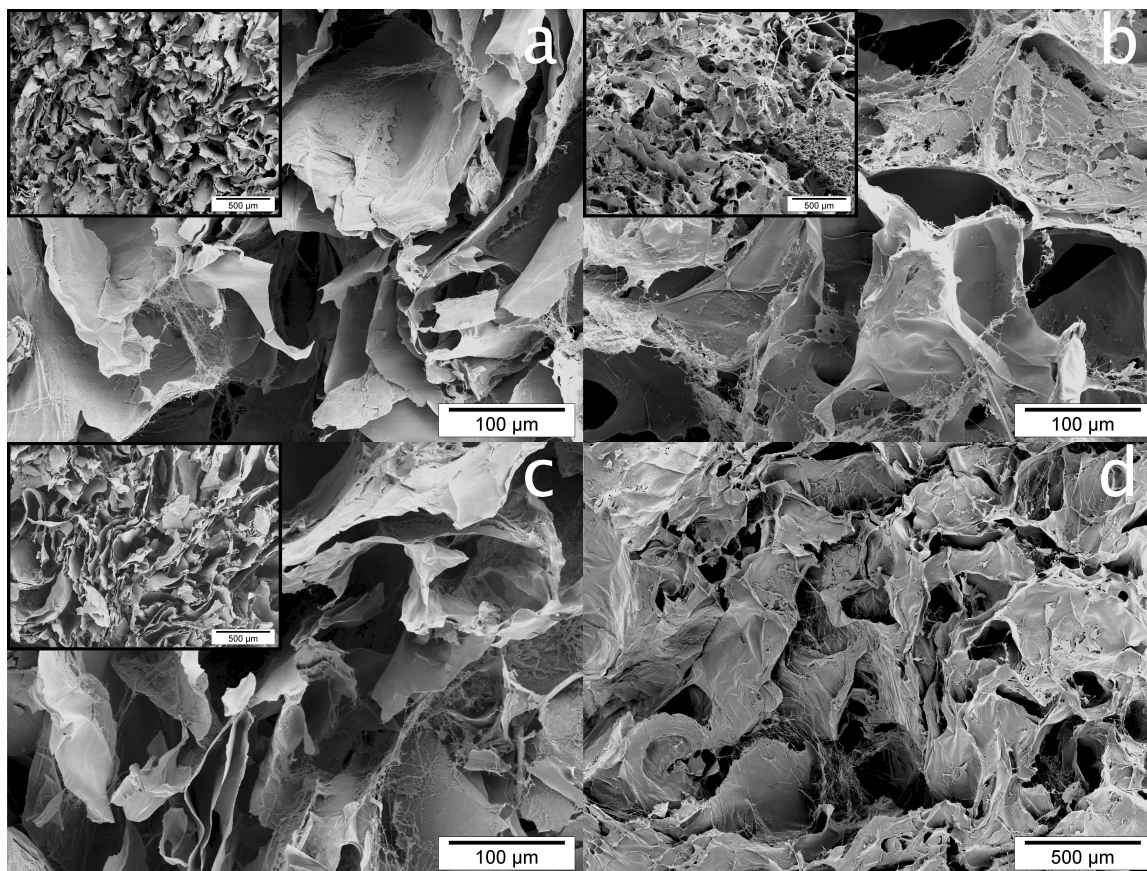


Figure S3. Aerogels from 5 (a,b) and 7 (c,d) FT cycles of 0.6% CNF suspension: (a,c) radial cross sections; (b,d) external surfaces. Inset scale bar = 500 μm.

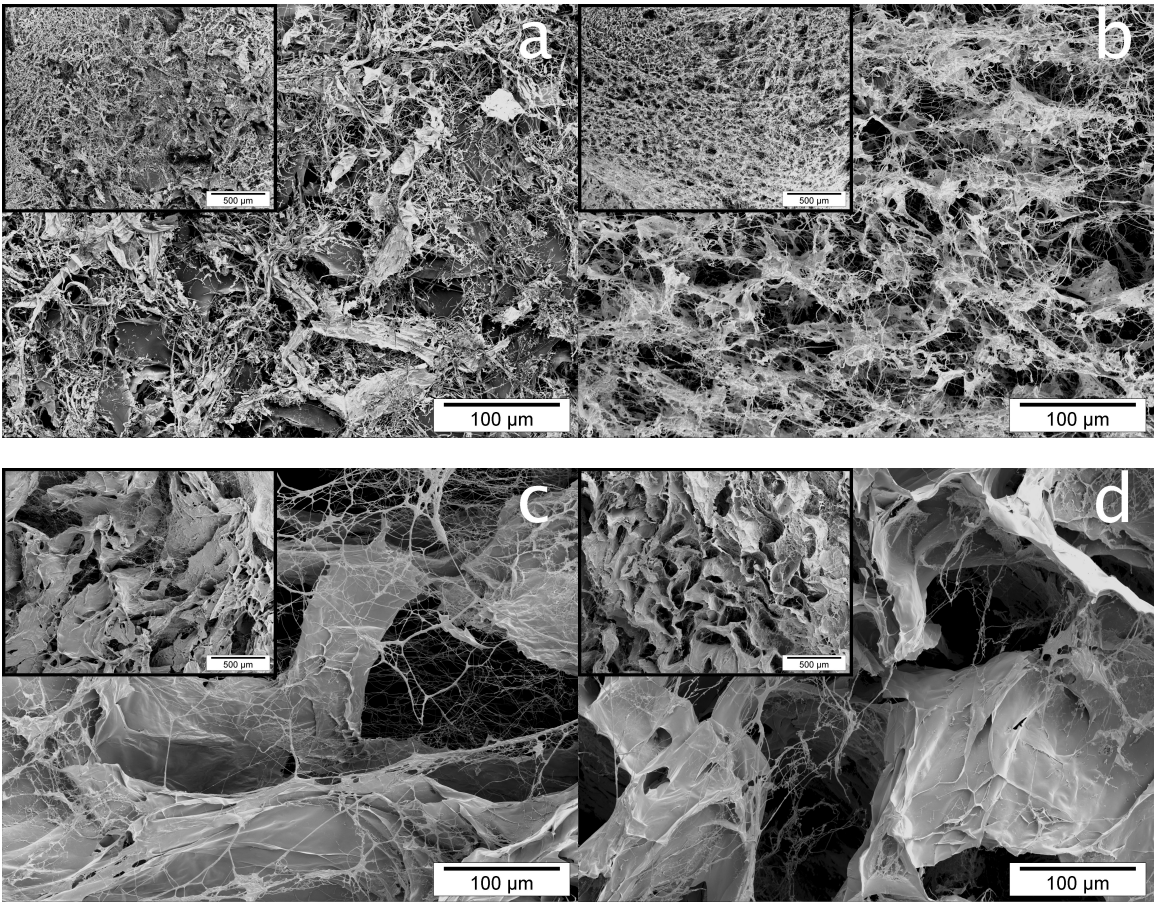


Figure S4. External surfaces of 3 FT aerogels of aqueous CNF suspensions at: (a) 0.05 wt%; (b) 0.1 wt%; (c) 0.2 wt% and (d) 0.4 wt% concentrations. Inset scale bar = 500 μm.

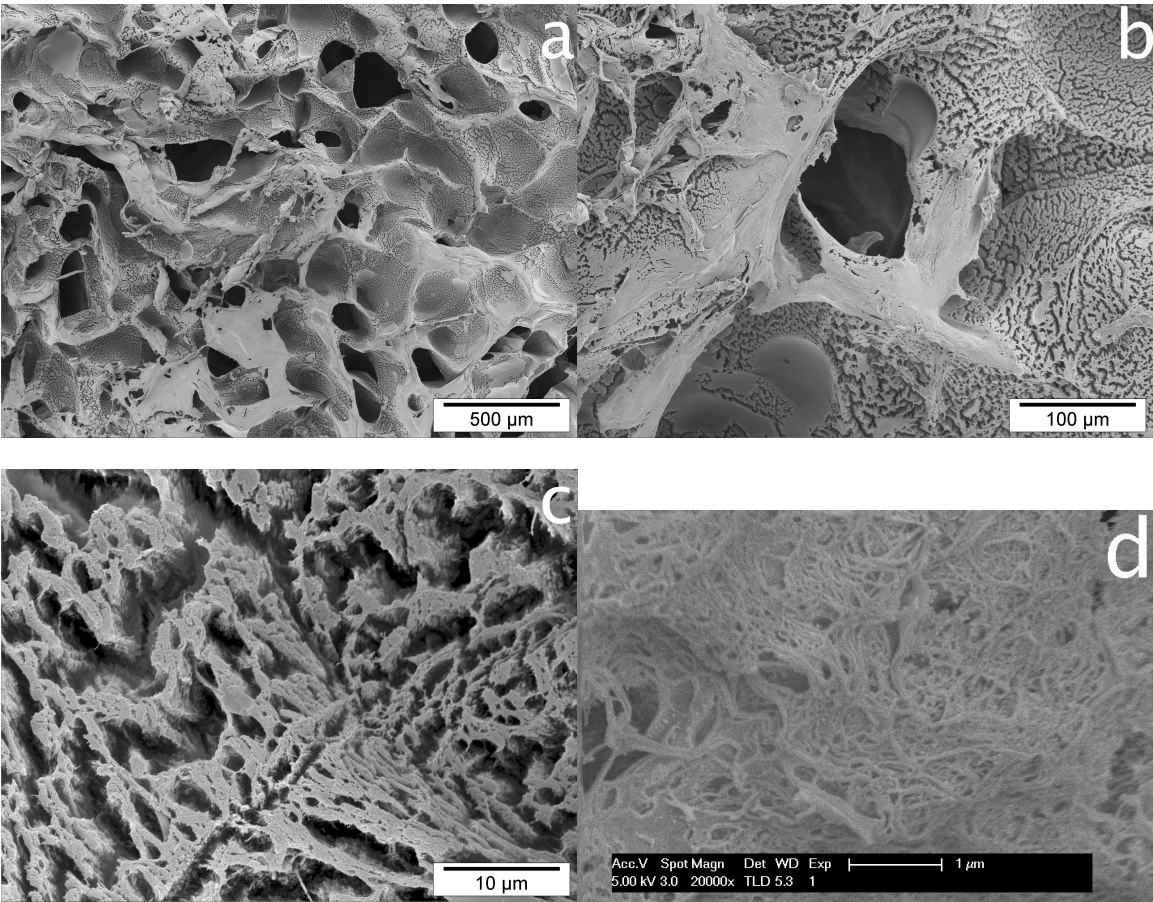


Figure S5. External surface of 3 FTTBA aerogels.