

Supplementary Materials

Direct Cryo Writing of Aerogels Via 3D Printing of Aligned Cellulose Nanocrystals Inspired by the Plant Cell Wall

Doron Kam¹², Michael Chasnitsky³, Chen Nowogrodski¹, Ido Braslavsky³, Tiffany Abitbol⁴, Shlomo Magdassi^{2*} and Oded Shoseyov^{1*}

¹ Department of Plant Sciences and Genetics in Agriculture, Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Rehovot 76100, Israel.

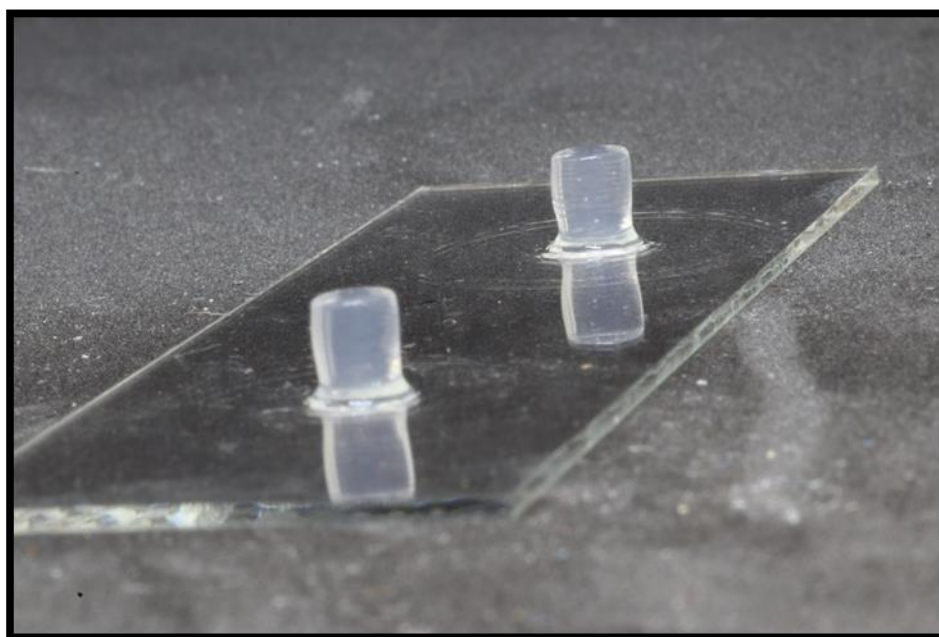
² Casali Center of Applied Chemistry, Institute of Chemistry, The Hebrew University of Jerusalem, Jerusalem 91904, Israel.

³ Institute of Biochemistry, Food Science and Nutrition, Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Rehovot 76100, Israel.

⁴ RISE, Stockholm 114 28, Sweden.

* Correspondence: magdassi@mail.huji.ac.il, shoseyov@agri.huji.ac.il

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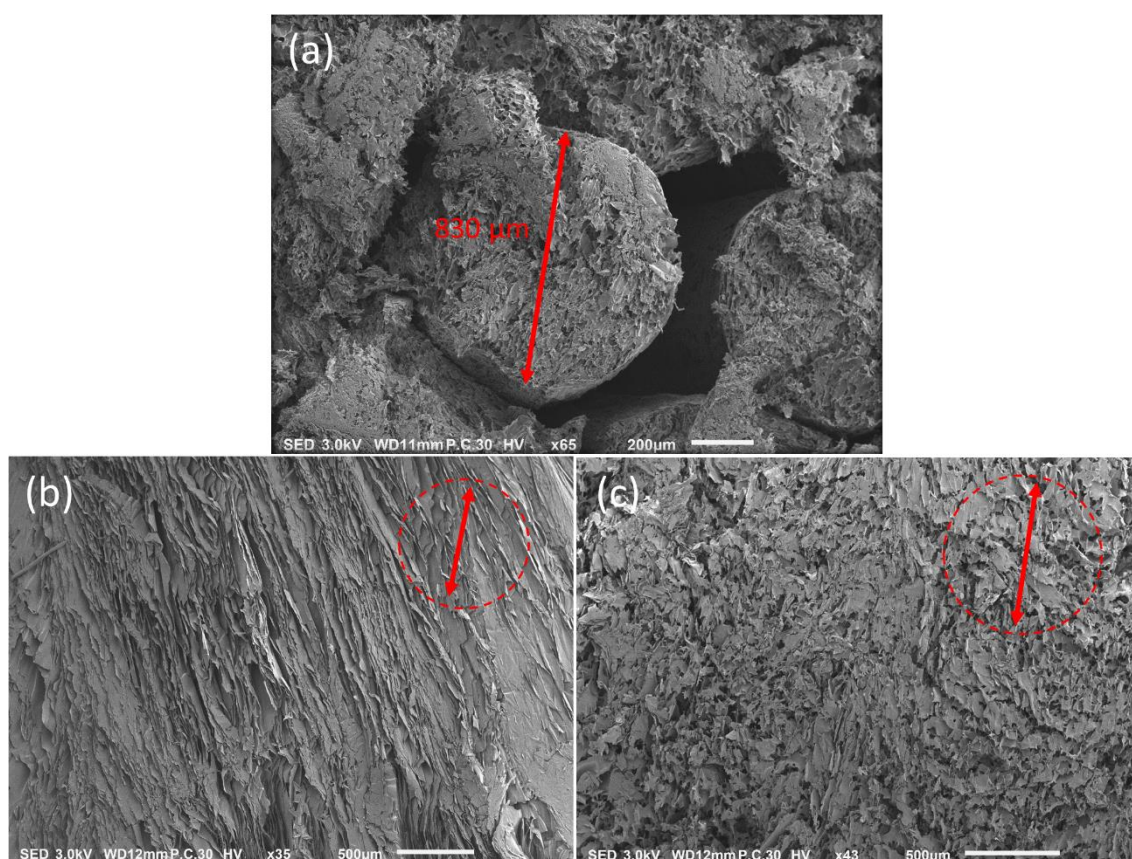


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Figure S1. Photograph of 3D printed pure CNC cylinders pre-freezing (diameter = 5 mm; height = 5 mm).

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21 **Figure S2.** SEM cross-section of: (a) 1:10 CNC:XG ink 3D printed with large spaces as a control sample
22 to demonstrate poor adhesion in the vertical and horizontal planes. Printed “filaments” with circular
23 (830 μm diameter) cross-sections can be seen in the (b) 0:1 sample and (c) 1:50 sample. Red-dashed
24 circular outlines are placed for reference to indicate a size relative to a filament with a 830 μm
25 diameter.

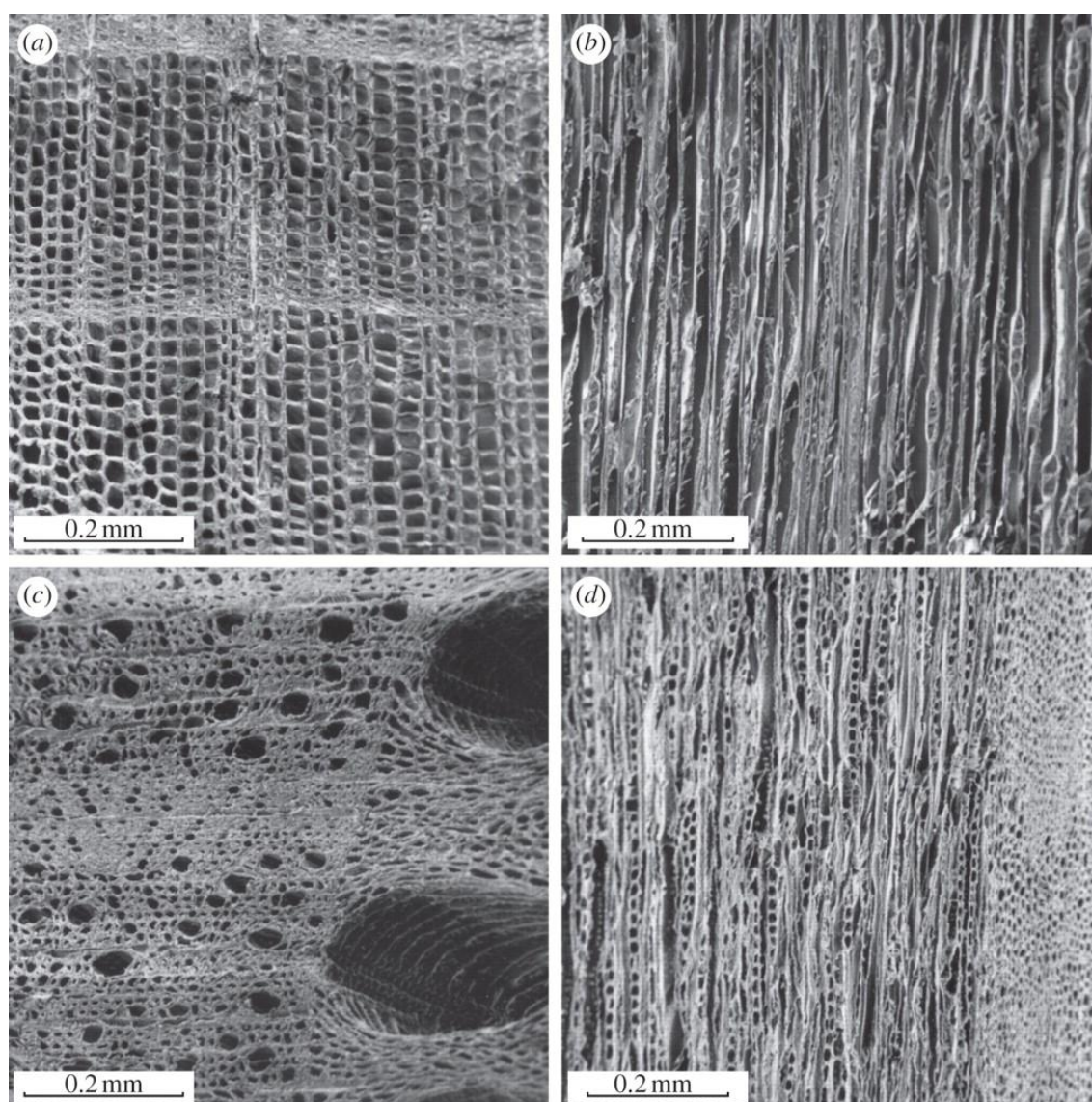


Figure S3. Scanning electron micrographs of wood: (a) cedar, cross-section; (b) cedar, longitudinal section; (c) oak, cross-section; (d) oak, longitudinal section.

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References

1. Gibson, L.J. The hierarchical structure and mechanics of plant materials. *J. R. Soc. Interface* **2012**, *9*, pp 2749–2766.