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ADVANCED FUNCTIONAL MATERIALS

Supporting Information

for *Adv. Funct. Mater.*, DOI: 10.1002/adfm.201303321

Spinning Angora Rabbit Wool-Like Porous Fibers from a Non-Equilibrated Gelatin/Water/2-Propanol Mixture

*Philipp R. Stoessel, Robert N. Grass, Antoni Sánchez-Ferrer, Roland Fuhrer, Thomas Schweizer, Raffaele Mezzenga, and Wendelin J. Stark**

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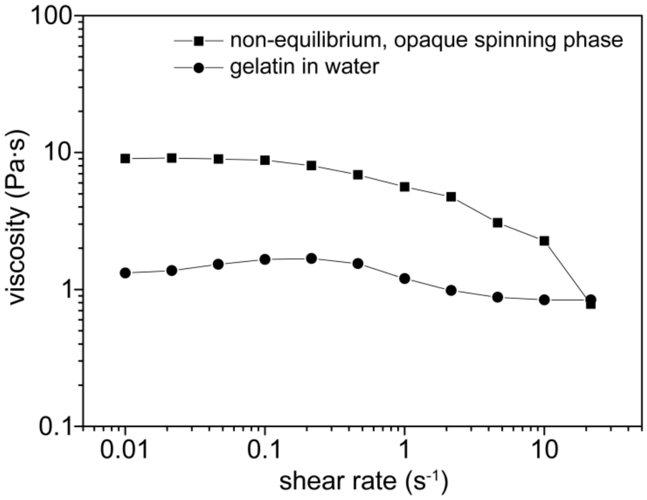

Figure S1. Flow curves of the spinning phase and a 27 wt% aqueous gelatin solution at 50 °C. The spinning phase showed a higher zero-shear viscosity (9.1 Pa·s) and more prominent shear-thinning behavior then the reference gelatin solution (1.3 Pa·s).

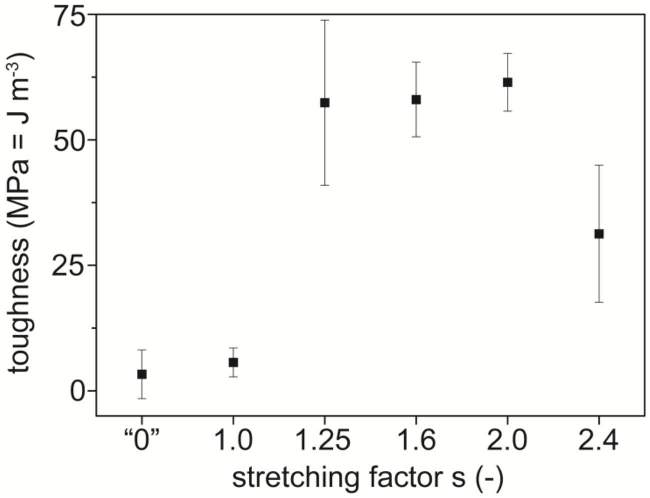

Figure S2. Toughness (area under the stress vs. strain curve) of gelatin fibers spun at different stretching factors. A simultaneous increase in true strain at break, elastic modulus and strain at break led to a sharp increase in toughness for fibers with s > 1. Analogous to the true strain at break (see Figure 4 (d)), the toughness of gelatin fibers at maximal stretching factor (s = 2.4) decreased.

Equation (1), defining the order parameter S for XRD measurements according to Lovell and Mitchell.

$$S = \frac{1}{2}\langle 3\cos(\theta)^2 - 1\rangle = \frac{1}{2}\frac{\int_0^{\frac{\pi}{2}} I(\theta)\,(3\cos(\theta)^2 - 1)\sin(\theta)d\theta}{\int_0^{\frac{\pi}{2}} I(\theta)\sin(\theta)d\theta}$$

R. Lovell, G. R. Mitchell, Acta Crystallogr. A **1981**, *37*, 135.

G. R. Mitchell, A. H. Windle, in *Developments in Crystalline Polymers-2*, (Ed: D. C. Bassett), Elsevier Applied Science, London **1988**, 115.