

Electronic Supplementary Information

for

**Electrospinning of collagen: Enzymatic and spectroscopical analyses reveal solvent-independent disruption of the triple-helical structure**

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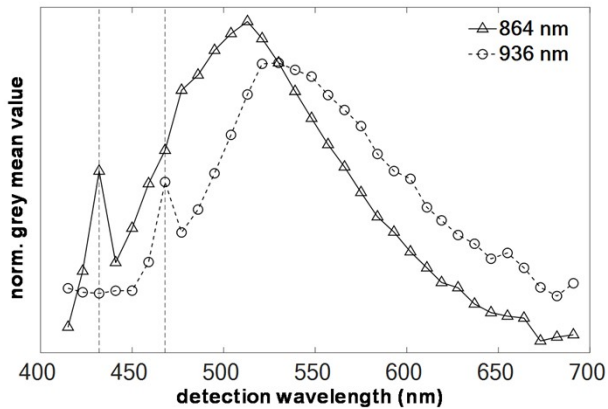
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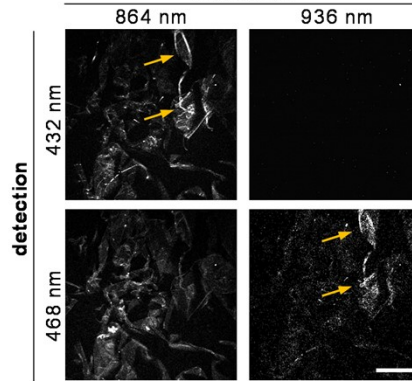
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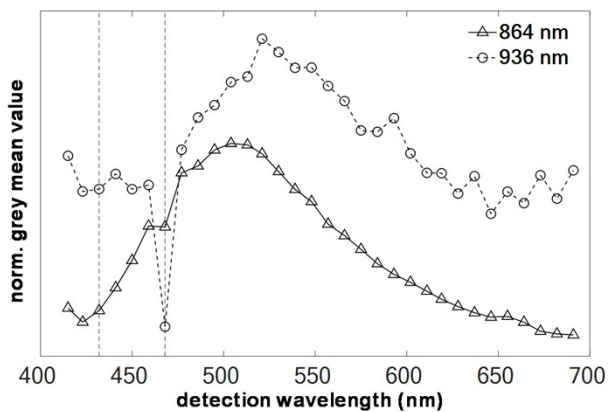
**a) Spectral emission of rat tail collagen (I) foam**



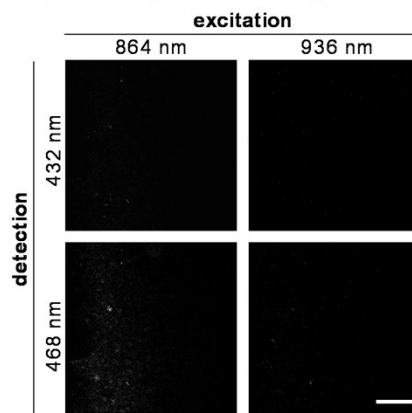
**b) SHG images of rat tail collagen (I) foam**



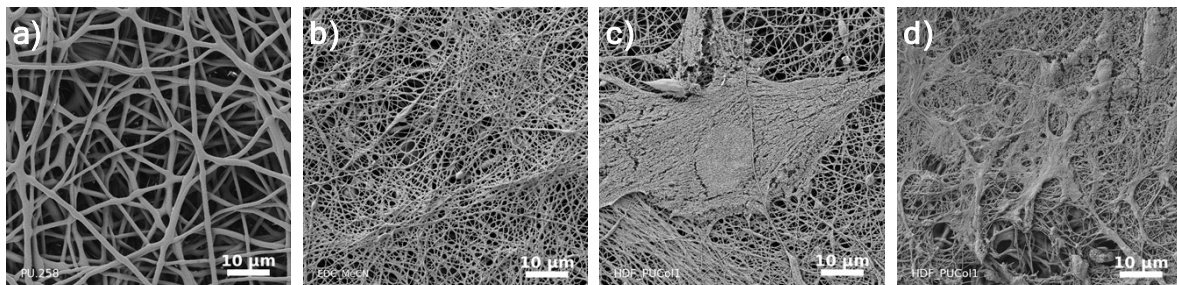
**c) Spectral Emission of ES collagen**



**d) SHG images of ES collagen**



**Figure S 1 Second Harmonics Generation (SHG) comparison.** *a) Spectral emission of collagen (I) foam at two excitation wavelengths: 864 nm and 936 nm. Displayed is the recorded normalized grey mean value as function of the emission wavelength. Dotted vertical lines indicate the half wavelengths of the excitation wavelengths: at 468 and 936 nm. b) SHG images of collagen foam, indicating SHG-active regions of the foam at exactly half of the excitation wavelengths (yellow arrows). SHG-active regions remain visible when both the excitation and detection wavelength are proportionally increased. c) Analogously, spectral emission of electrospun collagen (ES-HAc/EtOH-30). d) Representative SHG images of electrospun collagen. No SHG-active regions can be detected in electrospun collagen. Scalebars in (b) and (d) correspond to 50  $\mu\text{m}$ .*



**Figure S 2 SEM analysis of electrospun mats for cell culture.** *a) Electrospun PU (ES PU). b) Electrospun collagen after crosslinking on top of electrospun PU (ES PUCOL). c) hDFs on collagen fibers (ES PUCOL) after 24 hours. d) hDFs on collagen fibers (ES PUCOL) after 7 days.*