Supplementary Information for:

Time-lapsed nanoscale maps of the elastic modulus of collagen during cross-linking by bimodal AFM

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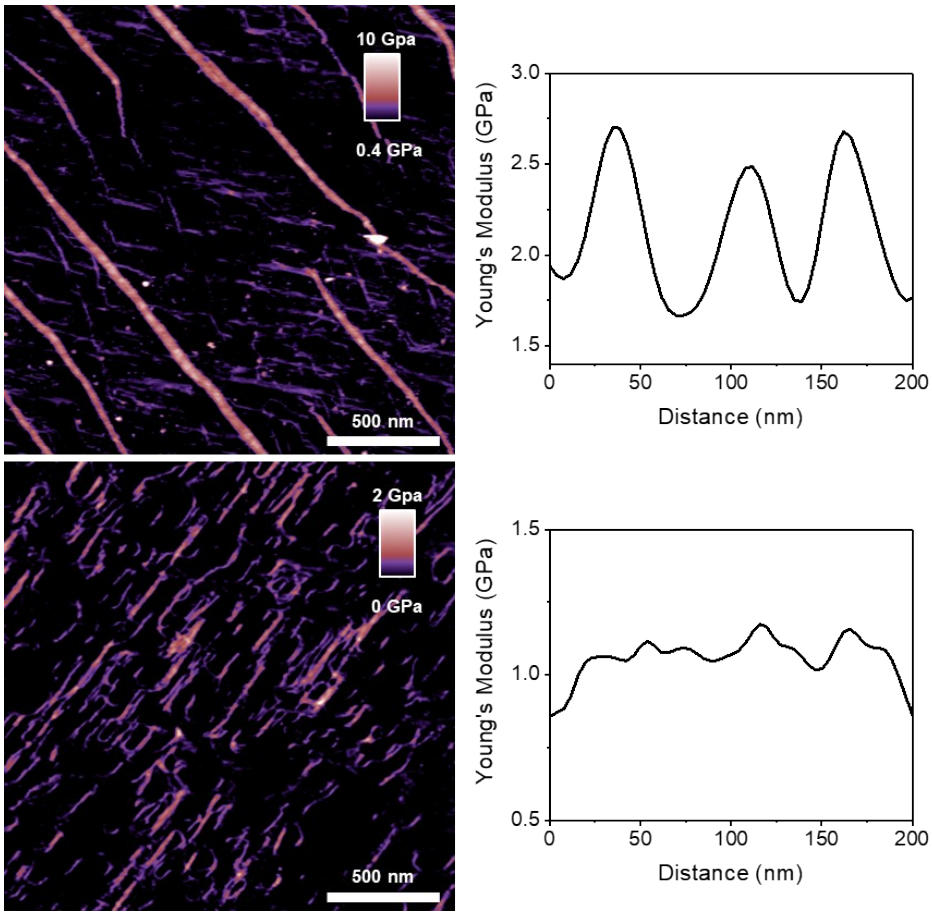

Fig. S1. Elastic maps of collagen nanoribbons crosslinked by ribose (top panel) or glutaraldehyde (bottom panel) after three months of incubation time. Young's modulus cross-section across the line marked in yellow. Additional bimodal AFM data: f_1 = 439 kHz, k_1 = 0.108 nN/nm, Q_1 = 1.5; f_2 = 7.8 MHz, k_2 = 5.18 nN/nm, Q_2 = 2.8; A_{01} = 10 nm, A_{02} = 1.0 nm.

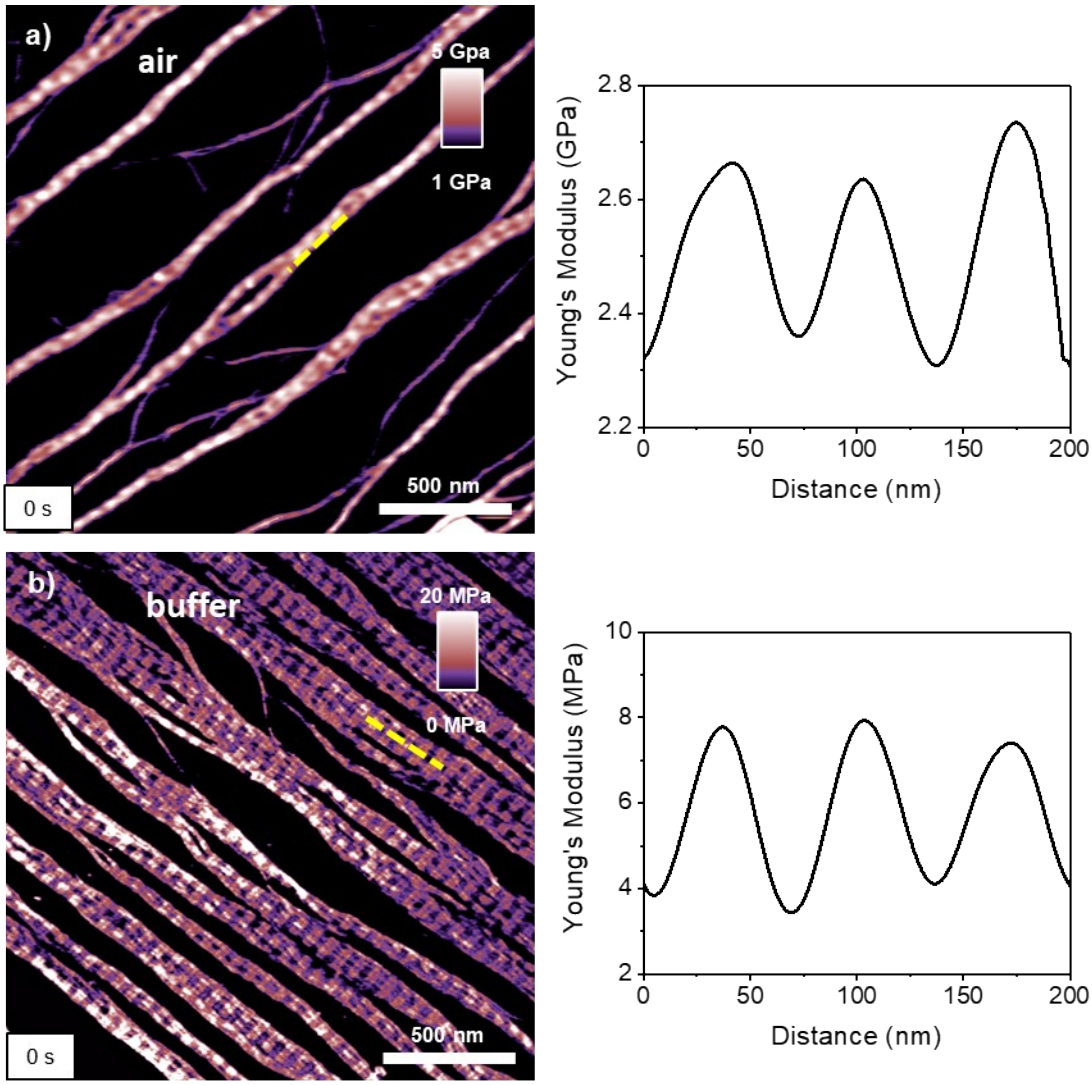

Fig. S2. Elastic maps of dry and wet (in buffer) collagen nanoribbons at 0 s of incubation time and the corresponding cross section across the dashed lines. a) Elastic maps of dry collagen nanoribbons. The maps were obtained in 40% humidity and 27.3 ºC by applying a peak force on the nanoribbons of 50 nN (100 nN on mica). Additional bimodal AFM data: f_1 = 314 kHz, k_1 = 48 nN/nm, Q_1 = 600; f_2 = 1940 kHz, k_2 = 1844 nN/nm, Q_2 = 660; A_{01} = 110 nm, A_{02} = 1.2 nm. b) Elastic maps of collagen nanoribbons in a buffer solution at 0 s of incubation time and the corresponding cross section. The maps were obtained in buffer by applying a peak force on the nanoribbons of 218 pN (15 nN on mica). Additional bimodal AFM data: f_1 = 435 kHz, k_1 = 0.15 nN/nm, Q_1 = 1.5; f_2 = 7139 kHz, k_2 = 9.84 nN/nm, Q_2 = 3.6; A_{01} = 9 nm, A_{02} = 0.5 nm.