A Cell Culture Substrate with Biologically Relevant Size-scale Topography and Compliance of the Basement Membrane

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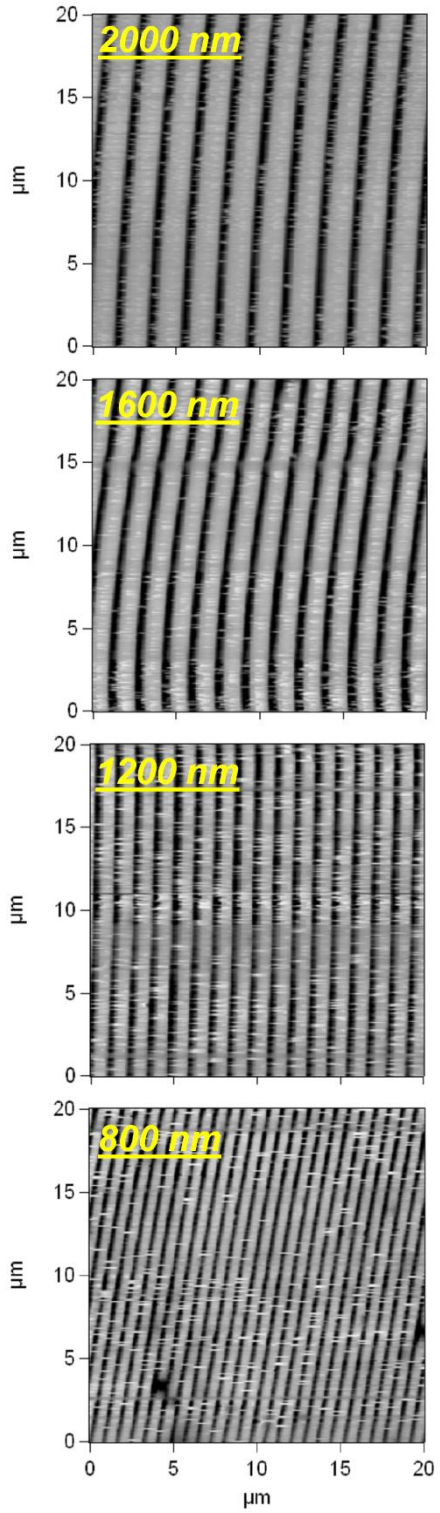
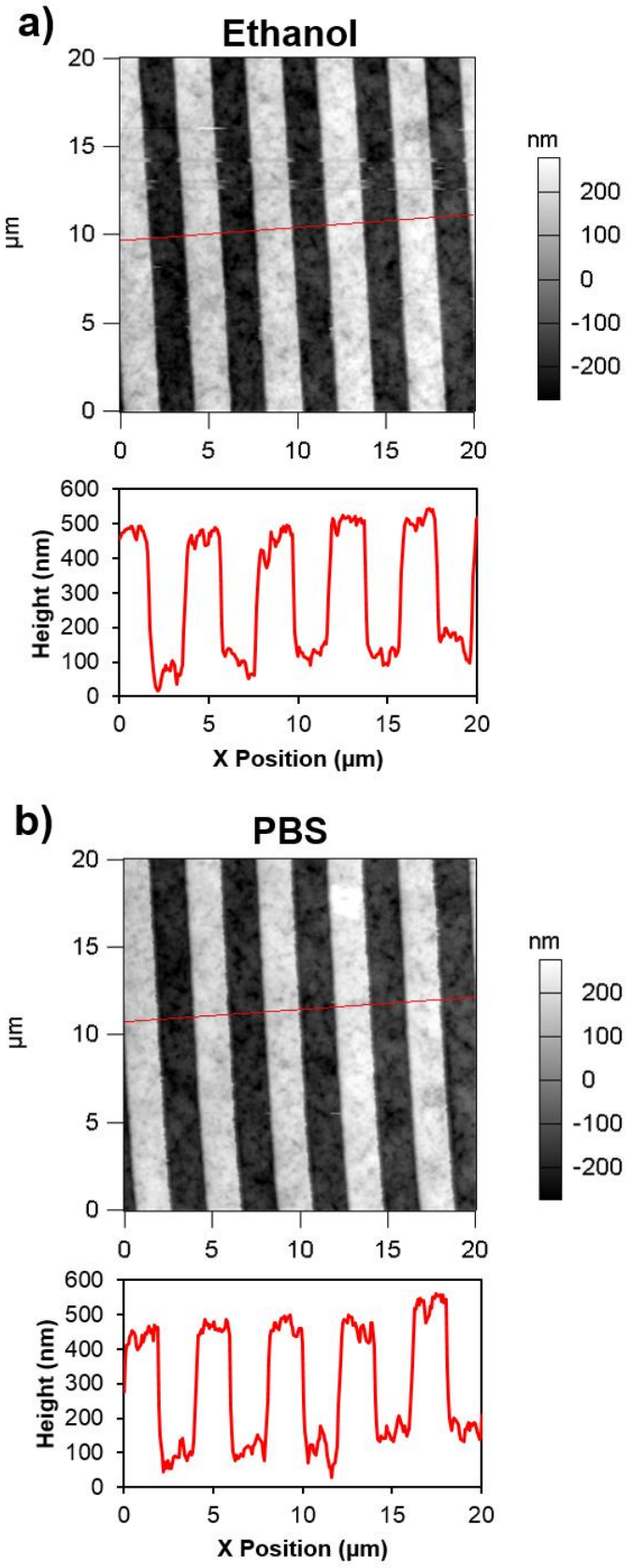
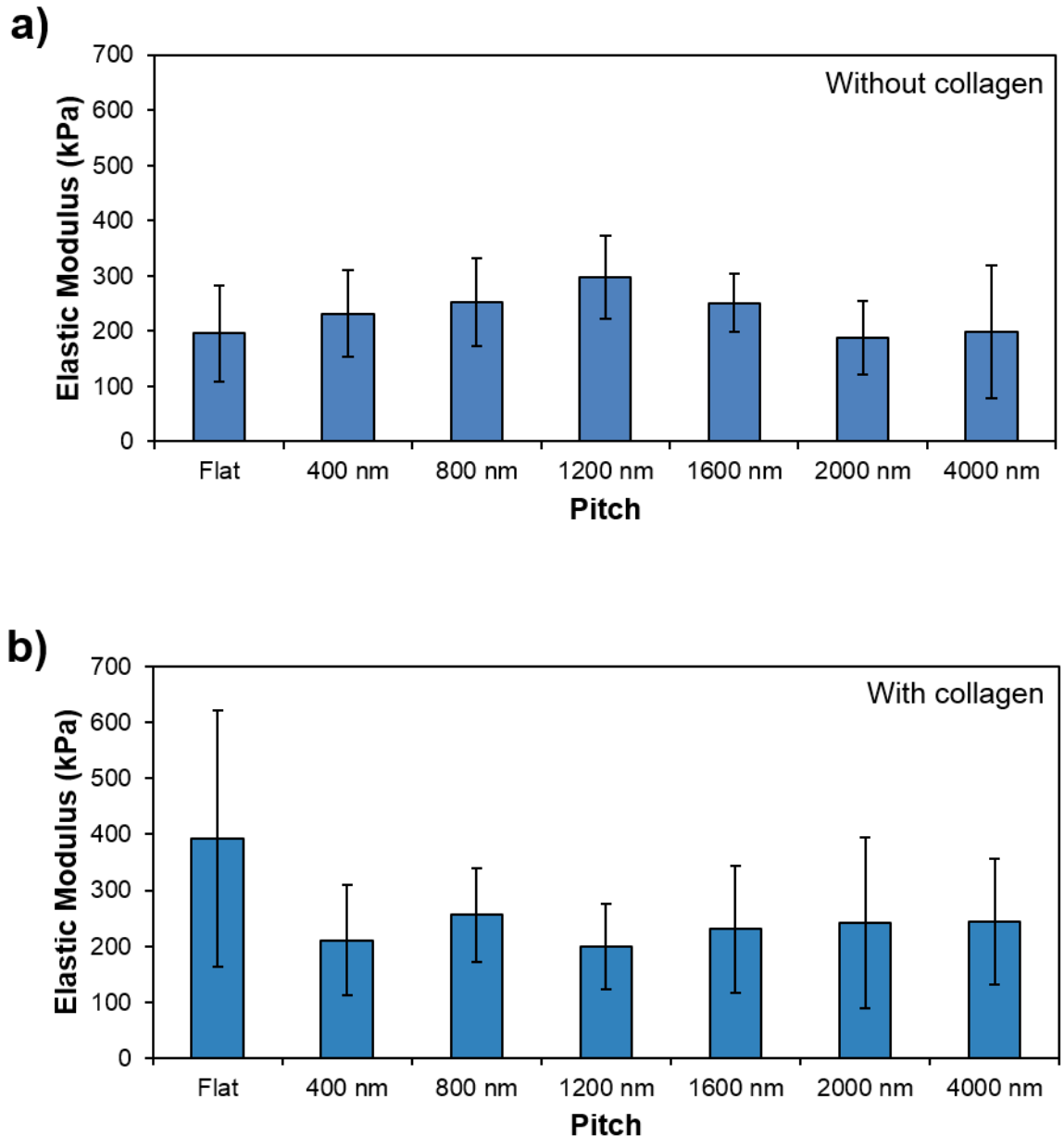
Supplemental Information



Supplemental Figure S1. AFM images of the molded ridge and groove topographies in the thin film hydrogels, ranging from 2000-800nm pitch, without collagen. The thin bridges observed at 800nm are an artifact of strong AFM tip - sample adhesions.



Supplemental Figure S2. AFM height maps with their associated cross-section of 4000 nm pitch ansiotropically patterned PEG surfaces made from PEG-DA 700 g/mol prepolymers swollen in either (a) ethanol or (b) PBS. Ridge cross-sectional areas were 0.749 ± 0.057 μm^2 in ethanol and 0.694 ± 0.035 μm^2 in PBS. These data suggest that PEG films swell similarly in ethanol as they do in PBS.



Supplemental Figure S3. Measured elastic moduli for anisotropic surfaces of varying pitches made (a) without collagen type I or (b) with collagen type I included in the prepolymer solution.