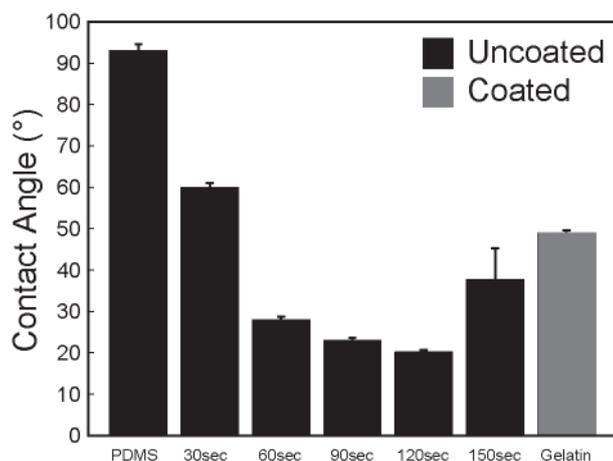
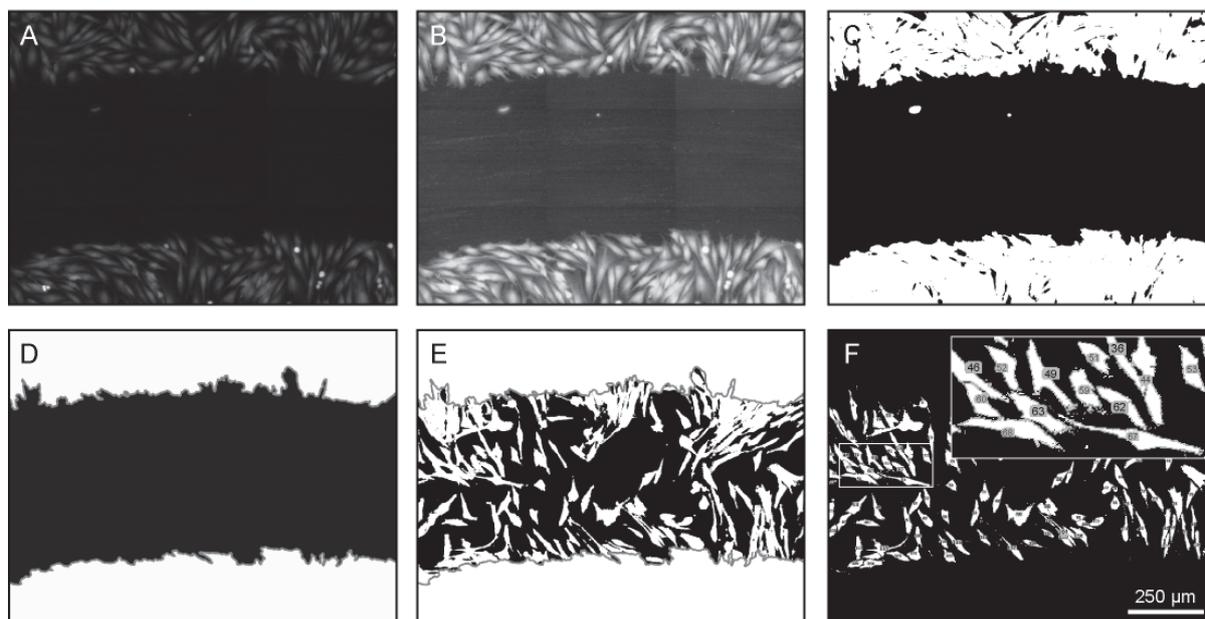


Supplementary Figure 1 Plasma and CA measurements



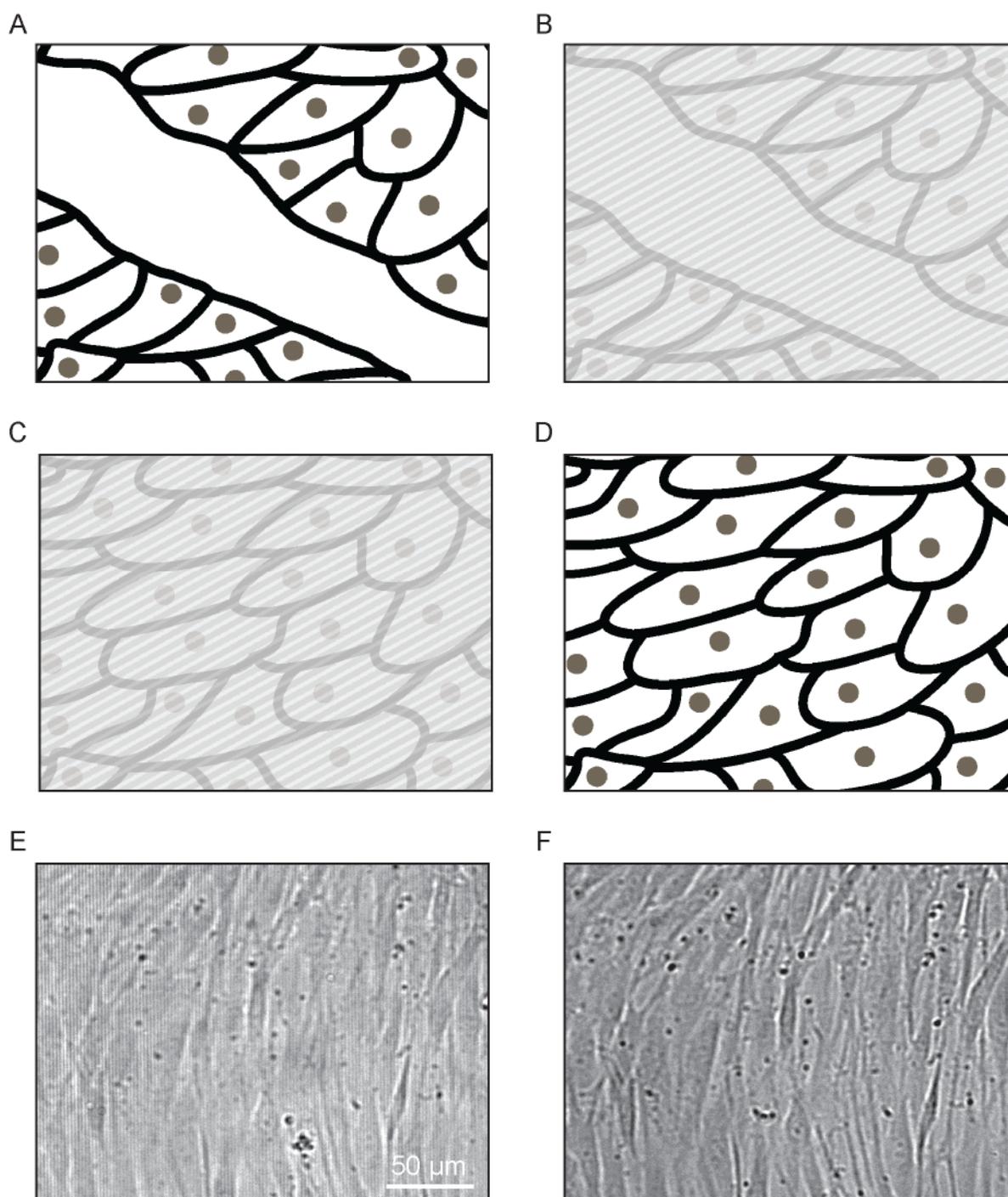
Supplementary Figure S1: Water static contact angle measured on the active PDMS patch surface upon different plasma treatments. The contact angle of untreated PDMS patches is compared with the contact angle of patches treated with low power (10 W) plasma for 30, 60, 90, 120, and 150 seconds and with the contact angle of gelatin coated PDMS.

Supplementary Figure 2 Image Processing Procedure

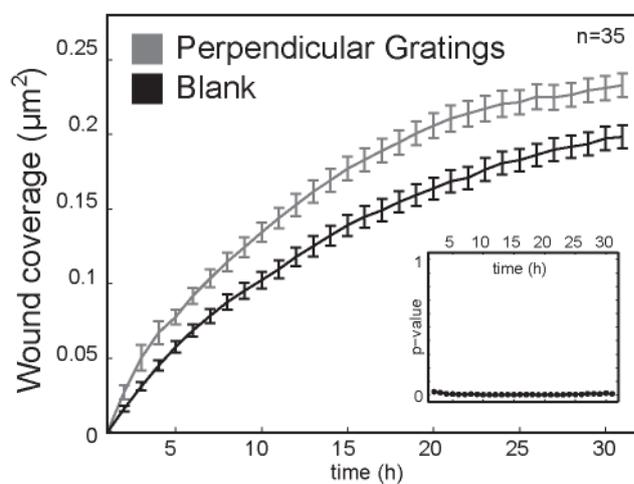


Supplementary Figure S2: Image processing and analysis. (A) Raw fluorescent image. (B) Contrast enhanced fluorescent image. (C) Image after threshold application. (D) Automatic wound boundary detection. (E) Calculation of cell coverage of the wounded region during a wound healing experiment. (F) Individual cell detection and alignment calculation.

Supplementary Figure 3 Patch Separability



Supplementary Figure 4 PEG coated patches



Supplementary Figure S4: Enhanced wound coverage through apical application of perpendicularly oriented PEG-coated gratings. Comparison of wound healing dynamics under perpendicular gratings (gray curve) or blank patch (black curve). Axes as in Figure 2C.