

Two-Dimensional Micropatterns of Self-  
Assembled Poly(*N*-isopropylacrylamide)  
Microgels for Patterned Adhesion and  
Temperature-Responsive Detachment of  
Fibroblasts

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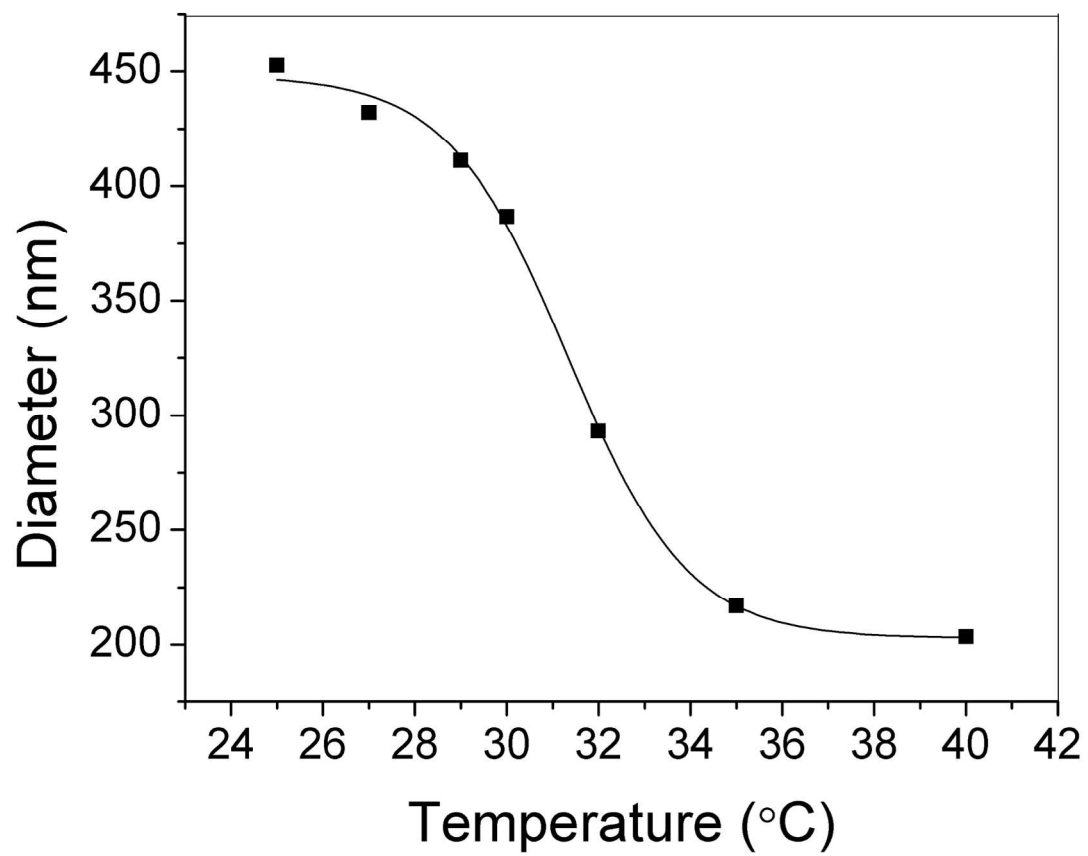


Figure S1. Temperature-dependent hydrodynamic radius of PNIPAM microgels in water as the temperature is increased from 25 °C to 40 °C.

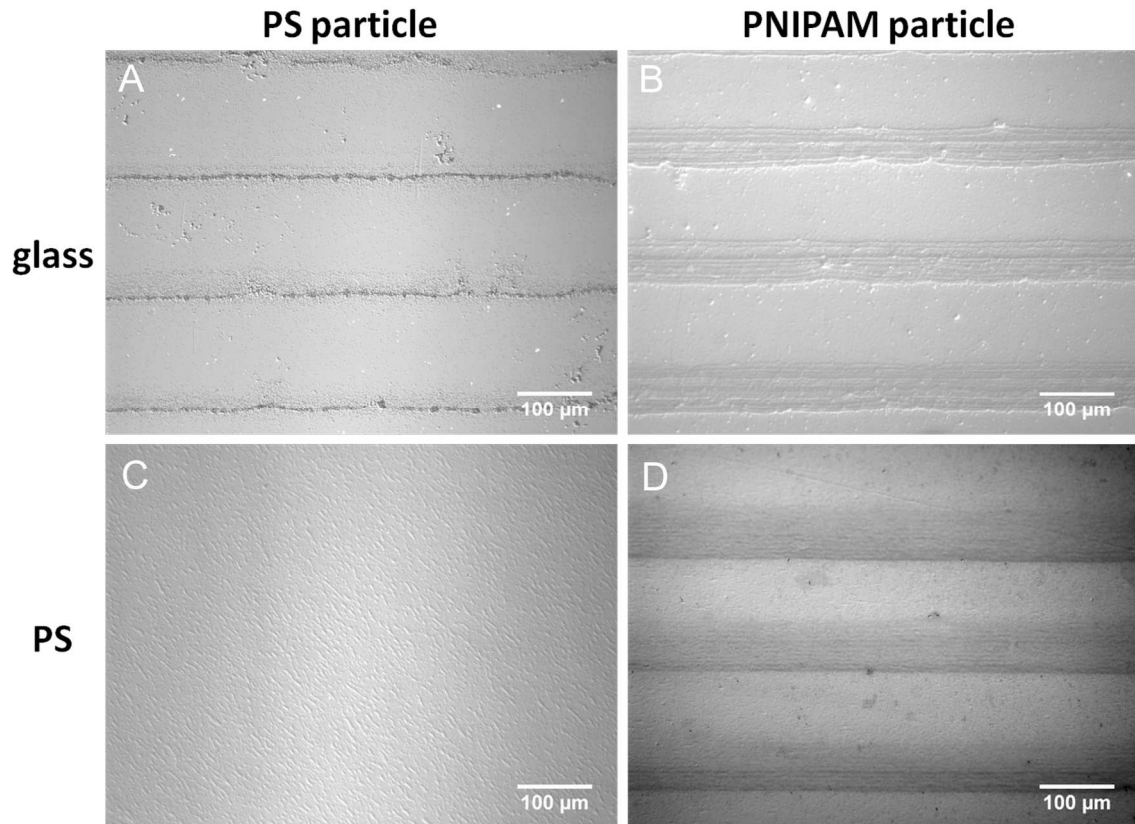


Figure S2. DIC microscopy images of PS and PNIPAM particles deposited on the substrates by dip coating methodology utilized herein. (A) PS particles on glass; (B) PNIPAM particles on glass; (C) PS particles on PS substrate and (D) PNIPAM particles on PS substrate.

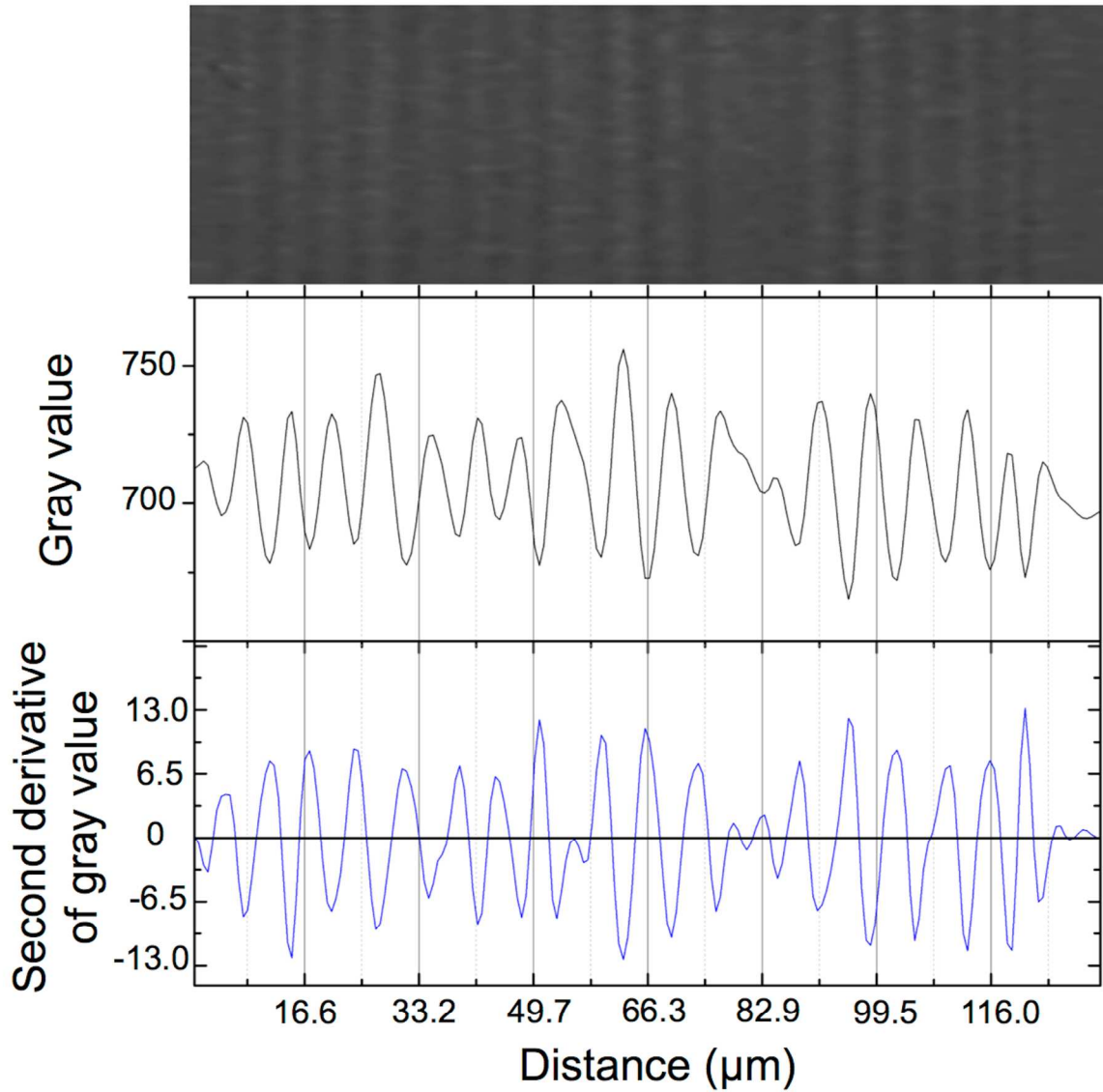


Figure S3. Calculation of the stripe widths and spacings between the stripes from a representative DIC image. A rectangle of fixed size is selected from the DIC image, and averaged vertically to reduce the background noise to produce a 1-D profile of gray values. The laplacian (2nd derivative) of the 1-D profile was then taken to determine the points of inflection. The consecutive distances between each point of inflection then determines the corresponding stripe widths and spacings between the stripes.

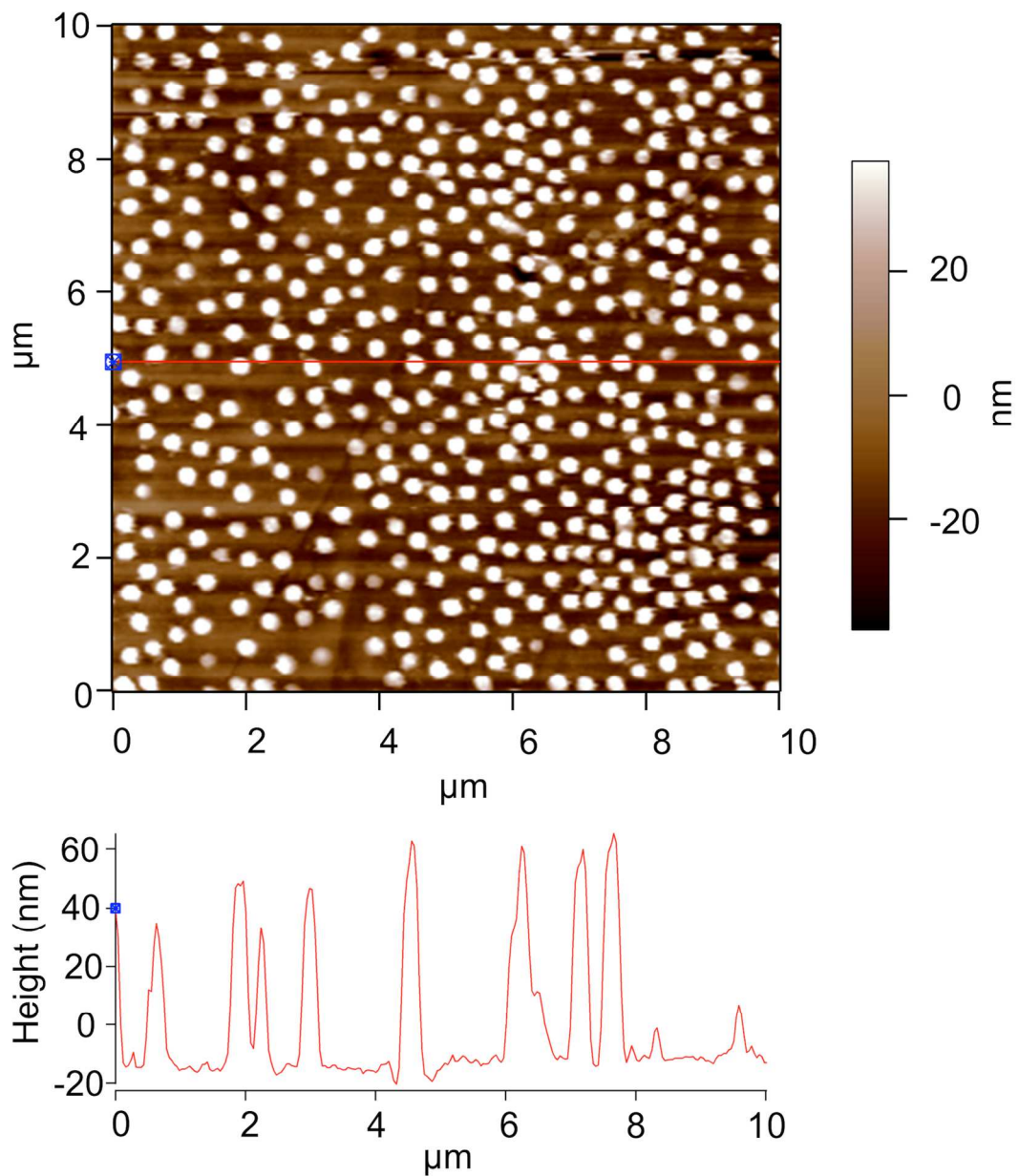


Figure S4. Representative AFM image of substrates coated with PNIPAM micropatterns of  $50 \mu\text{m}$  stripes/ $50 \mu\text{m}$  spacings in air, and the cross section profile along to the red line drawn on the image.

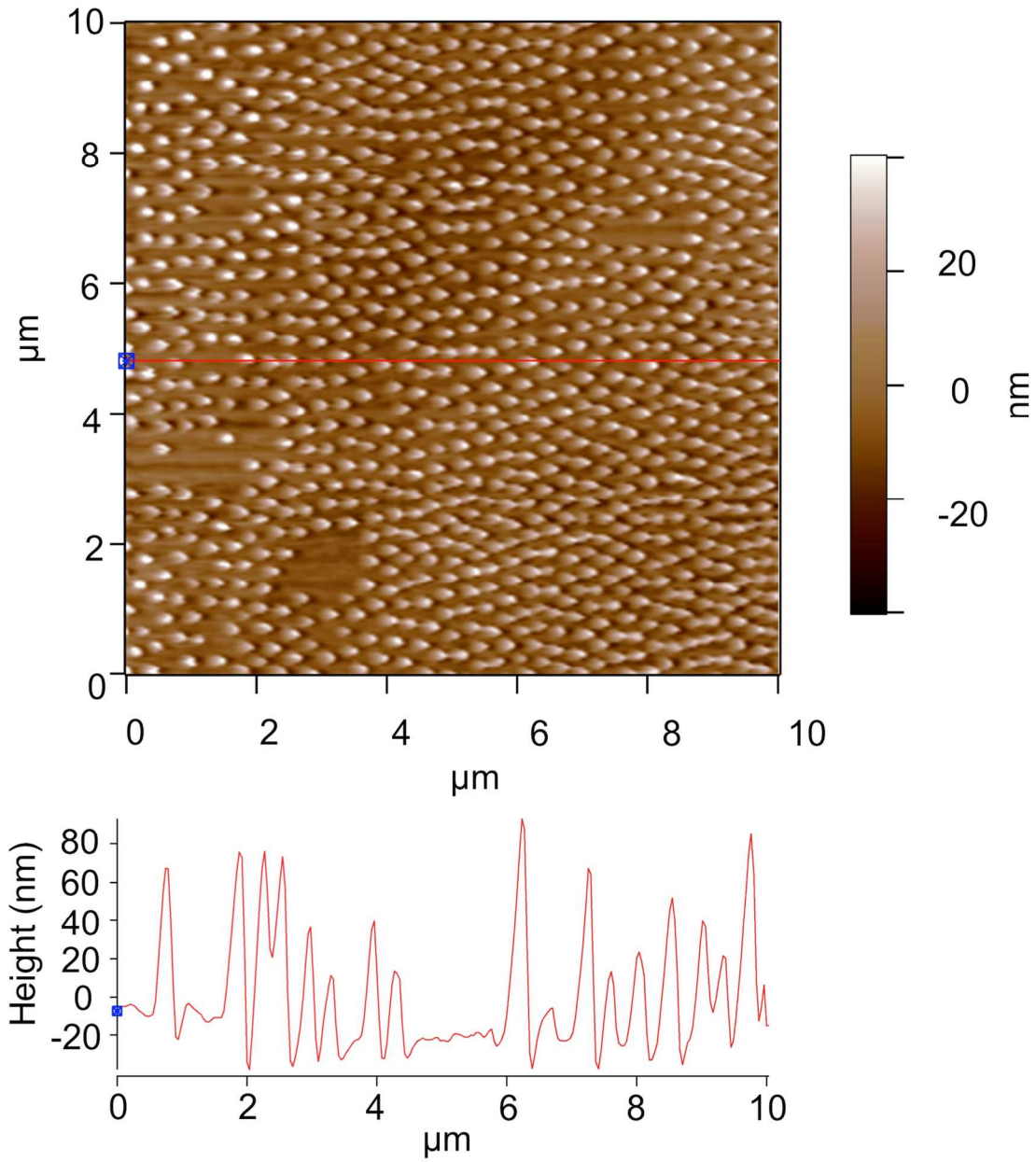


Figure S5. Representative AFM image of the substrate coated with PNIPAM micropatterns of 50  $\mu\text{m}$  stripes/50  $\mu\text{m}$  spacings in cell culture medium at 37  $^{\circ}\text{C}$ , and the cross section profile along to the red line drawn on the image.

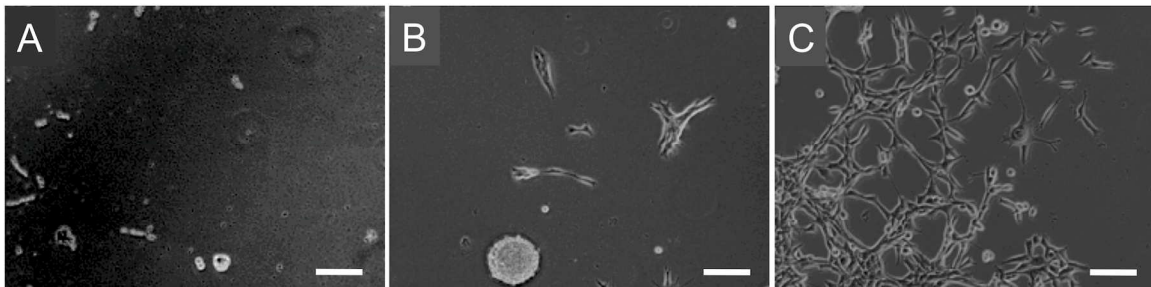


Figure S6. Representative optical microscope images of NIH3T3 fibroblast cells cultured on the PS substrates coated with air-dried PNIPAM microgel dispersion of (A)  $2 \times 10^{-2}$  wt%, (B)  $2 \times 10^{-3}$  wt%, and (C)  $2 \times 10^{-4}$  wt%, at 37 °C for 24 hr. Scale bar = 100  $\mu$ m.