

Supplementary material

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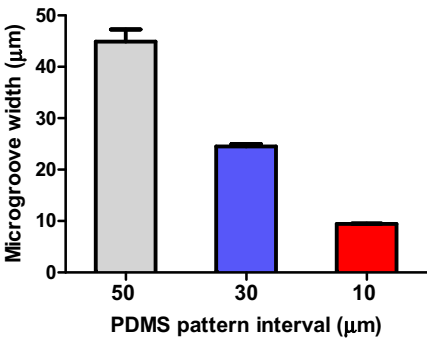


Figure S1: Microgroove width of patterns on hydrogels.

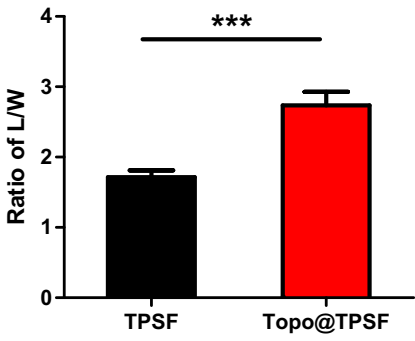


Figure S2: Ratio of long and short axis of Schwann cells on hydrogels.

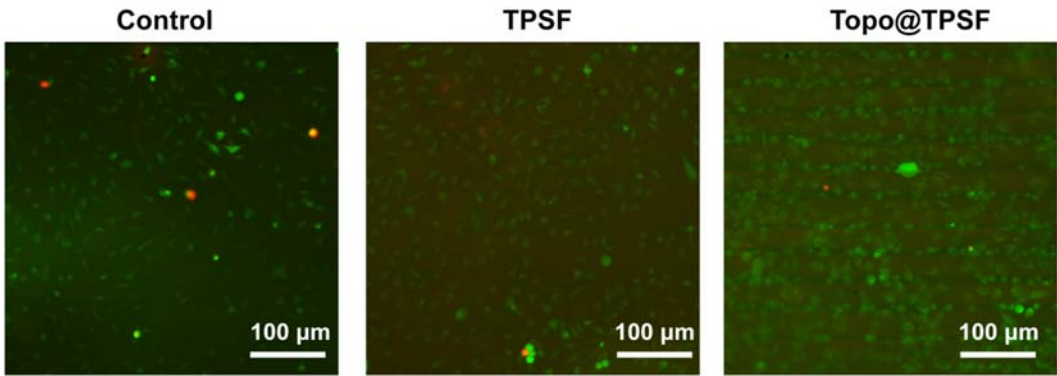


Figure S3: Live/dead cytotoxicity staining of L929 cells on hydrogels.

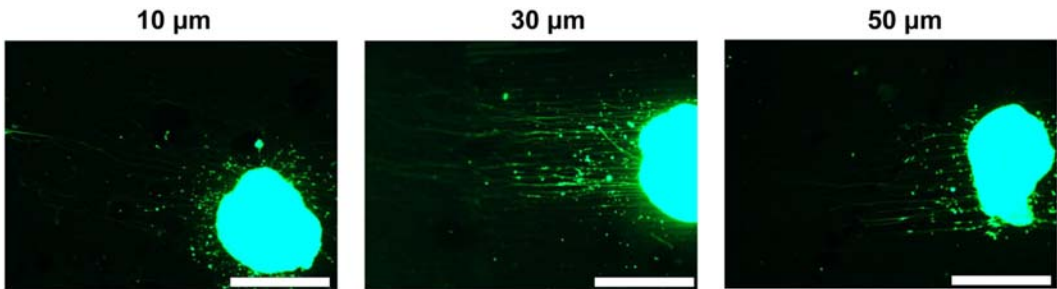
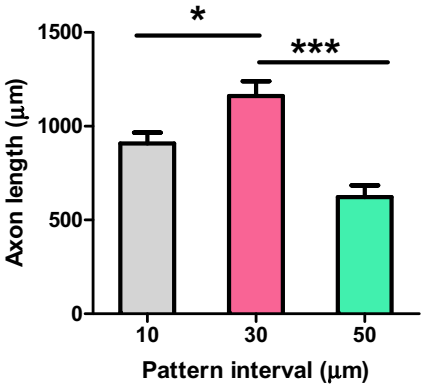
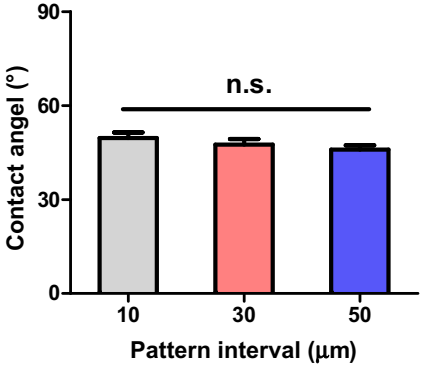


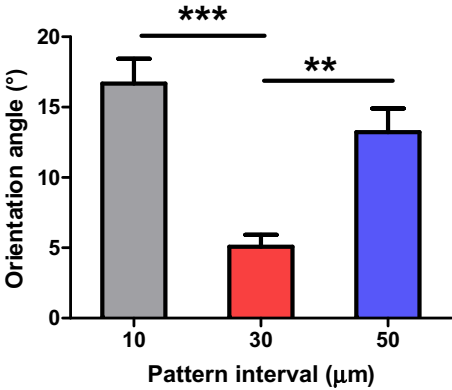
Figure S4: Fluorescence images of DRG cultured on Topo@TPSF hydrogel with a groove width of 10, 30, and 50 μm after 3 days of incubation.



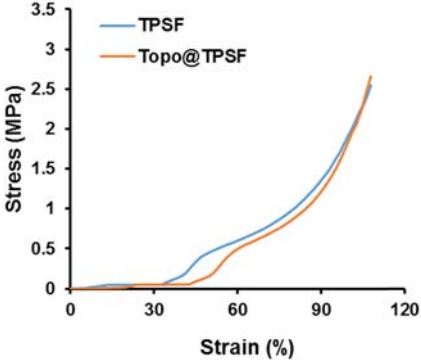
**Figure S5:** Axon growth of DRG cultured on **Topo@TPSF** hydrogel with a groove width of 10, 30, and 50 μm after 3 days of incubation. Data represent the mean ± S.E.M. ( $n = 5$ ).  $*p < 0.05$ ,  $***p < 0.001$ .



**Figure S7:** Wettability of **Topo@TPSF** hydrogel with a groove width of 10, 30, and 50 μm. Data represent the mean ± S.E.M. ( $n = 15$ ).



**Figure S6:** Orientation angle of neurites on **Topo@TPSF** hydrogel with a groove width of 10, 30, and 50 μm after 3 days of incubation. Data represent the mean ± S.E.M. ( $n = 5$ ).  $**p < 0.01$ ,  $***p < 0.001$ .



**Figure S8:** The compressive stress–strain curves of hydrogels.