

# Supporting Information

## Micropatterned coumarin polyester thin films direct neurite orientation

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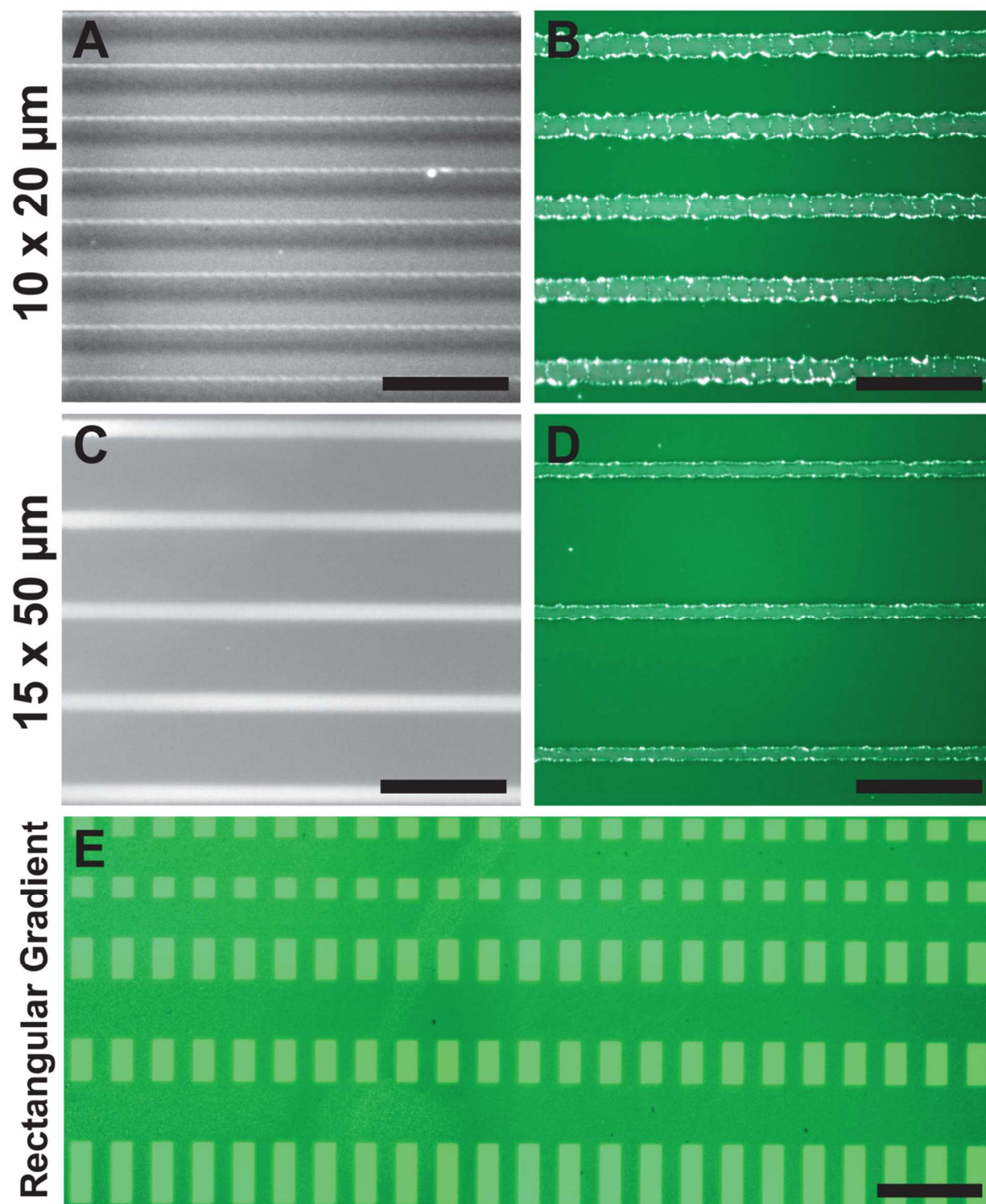
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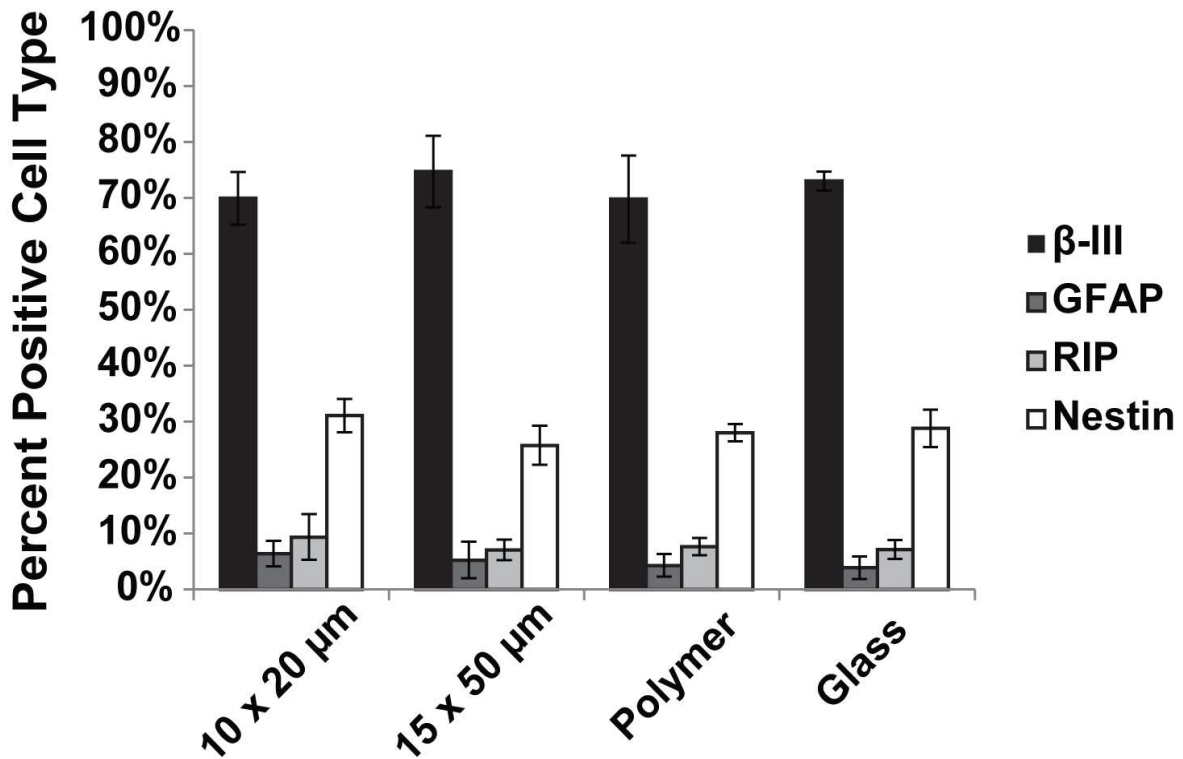
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**Figure S1.** 2D image analysis of polymer channels formed by light and a photoreactive coumarin polyester. (A-B) DAPI 20X fluorescent and IFM 40X images of 10 x 20  $\mu\text{m}$  channels. Scale bar = 100  $\mu\text{m}$ . (C-D) 15 x 50  $\mu\text{m}$  pattern visualized with DAPI filter and IFM, respectively. Scale bar = 50  $\mu\text{m}$ . (E) IFM image of gradient rectangular pattern. Scale bar = 500  $\mu\text{m}$ .



**Figure S2.** Cell percentage of neurons ( $\beta$ -III), astrocytes (GFAP), oligodendrocytes (RIP) and progenitors (nestin) from rat brain tissue harvest. There is no significant difference between cell-type and surface type. The majority of cells were neurons resulting in  $71.85 \pm 2.4 \%$ .