Supporting Information

Conjugated polymers for optical control of living cells electrical activity

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Figure S1. Contact angles images for all polymers in the three considered conditions. Pristine polymers a-d; Sterilized polymers e-h; Polymers after fibronectin incubation i-l. From top to bottom: PCPDTBT, P3HT, MEHPPV and PFO.
Figure S2. Images of HEK cells cultured on top of semiconducting organic polymers at 2 DIV.
Figure S3. Absorption spectra of the different active layers employed. At the wavelength used for excitation of rr-P3HT, MEHPPV and PCPDTBT ($\lambda = 475$ nm and $\lambda = 635$ nm) samples absorb about 60-80% of the incident light.
Figure S4. Representative bright field images of cells cultured onto PFO substrates, immediately before (a) and after (b) the illumination protocol used in the electrophysiology experiments (Blue light $\lambda = 435$ nm, photoexcitation density 73 mW/cm$^2$). Fluorescence imaging of the same cell stained with PI fully confirms the photo-toxic effect of the PFO polymer, leading to cell death. The experiment was carried out over $n = 6$ cells, giving fully comparable results.