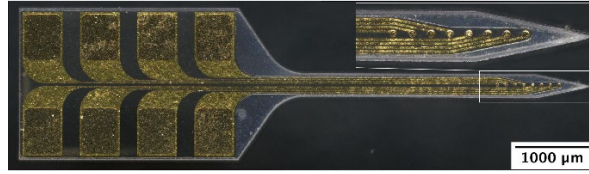
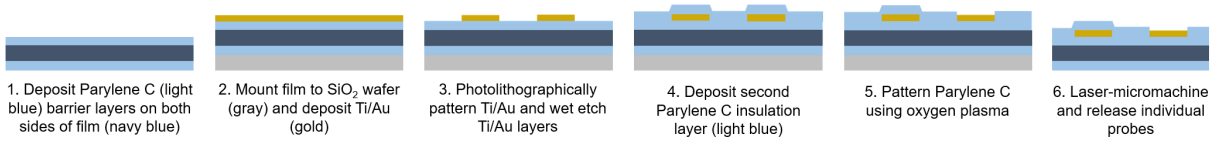


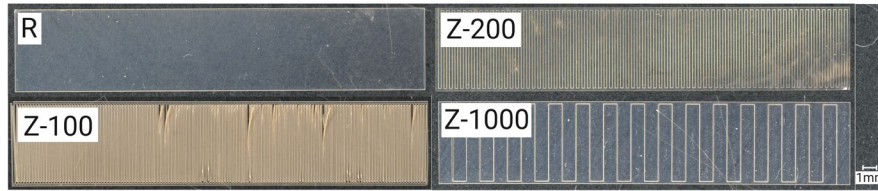
# The Effect of Laser Processing on Drug-Loaded Polymers for Microfabricated Neural Interfaces - Mueller



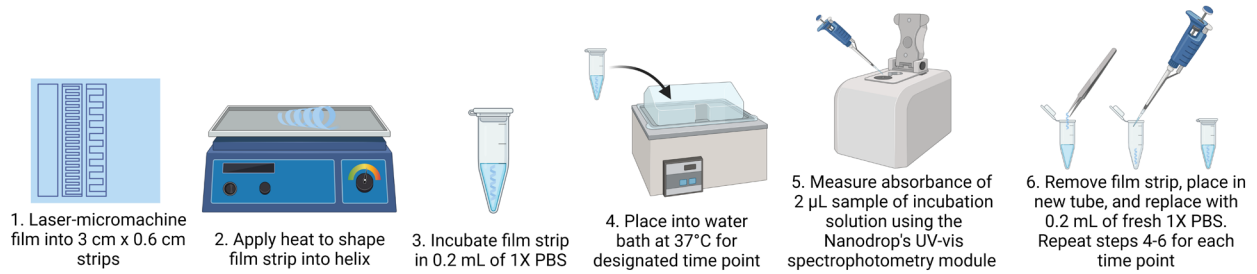
**Figure 1.** Resveratrol-loaded polymer intracortical microelectrode with functional recording electrodes.



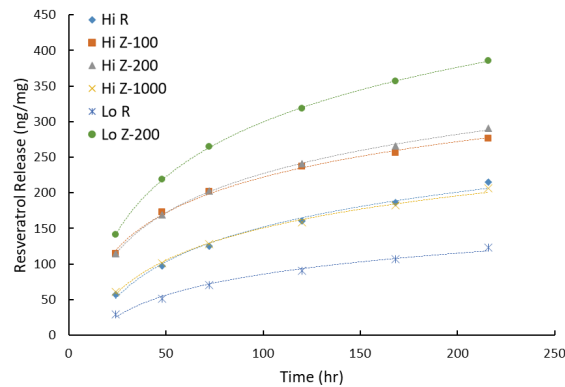
**Figure 2.** Microfabrication process to integrate recording electrodes on the polymer substrate.



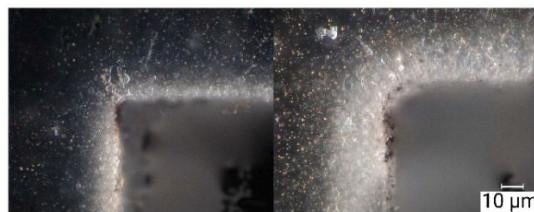
**Figure 3.** 4 different geometric cut-out patterns used in this work: (R) rectangular, (Z-100) 100  $\mu\text{m}$ -wide serpentine, (Z-200) 200  $\mu\text{m}$ -wide serpentine, and (Z-1000) 1000  $\mu\text{m}$ -wide serpentine.



**Figure 4.** Resveratrol release sample preparation and UV-vis measurement method.



**Figure 5.** Resveratrol release profile for 6 different combinations of high power (55% - Hi) and low power (5% - Lo) and 4 different geometries. Cuts with a higher laser path density showed an increased resveratrol release rate.



**Figure 6.** Laser-micromachined polymer samples cut with 5% (left) and 55% laser power (right) at 2000x.