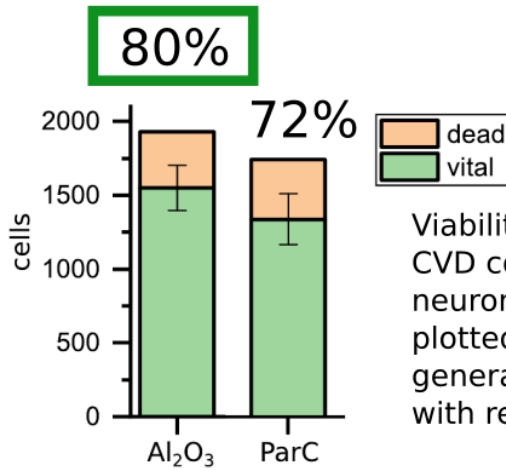
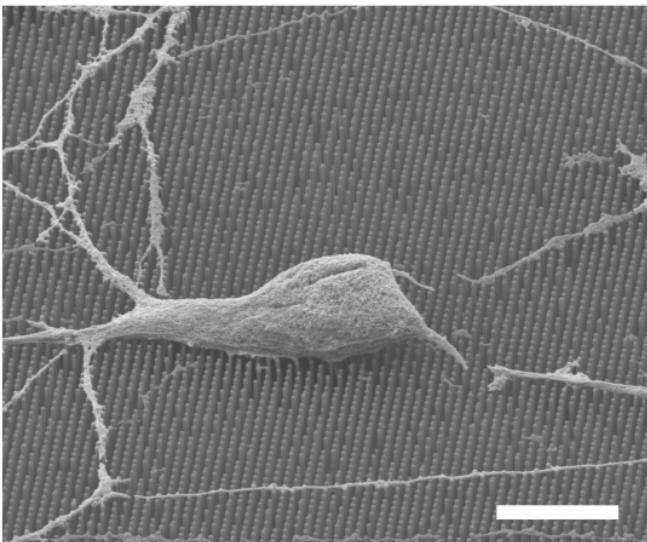


(left) Schematic including the dimension of the 3D-printed scaffold by two-photon lithography for cell culturing. (middle) Scanning electron microscope /SEM) image of a 3D-printed scaffold which is coated by ALD. Scale bar: 20 μm (right) Fluorescent confocal laser scanning microscopy image of a cultured 3D scaffold. Scale bar: 40 μm



Viability of neurons on Al₂O₃ by ALD and Parylene (ParC) by CVD coated glass substrates at 7 DIV. The counts for vital neurons plotted in green, the counts for dead neurons are plotted in red. ALD-coated substrates outperform Par C—generally treated as biocompatible—coated glass substrates with respect to cell viability.



SEM micrograph of a fully mature human induced stem cell-derived neuron cultivated on an alumina coated GaAs nanowire array. Without ALD-coating the viability on such a nanowire array is only about half (32 %) compared to ALD-coated nanowires (59 %). Scale bar: 5 μm