

Supplemental document to:

Transparent Microelectrode Arrays made by Ion Beam Assisted Deposition for Neuronal Cell *in vitro* Recordings

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Table 1. Details of MEA versions.

MEA version	#1	#2	#3
Track material	ITO	ITO	ITO
Track thickness [nm]	20	20	20
Electrode material	ITO	TiN on ITO	TiN on ITO
TiN thickness [nm]	-	40	200

Table 2. Impedance results.

Electrode size	Impedance @ 1 kHz [k Ω]			
	\varnothing 30 μ m		35 x 50 μ m ²	
MEA version	Mean	Stdev	Mean	Stdev
#1	1200	260	820	140
#2	320	25	195	11
#3	185	13	155	25

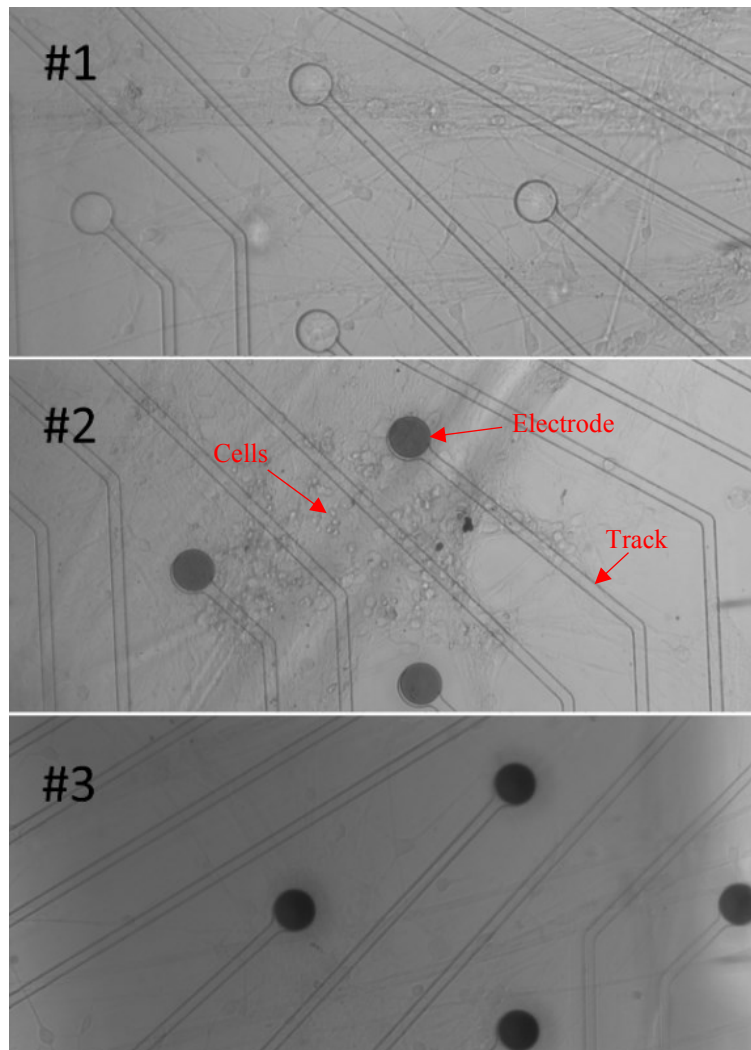


Fig. 1. Inverted microscope images of neuronal cell networks growing on MEAs. The cells are fully visible through the tracks and the electrodes of MEA Version 1. The visibility through the electrodes drops to partial in Version 2, but the cells are still visible (see especially the electrode pointed with an arrow). No visibility through the thick and opaque electrodes in Version 3. The diameter of the electrodes is 30 μ m.