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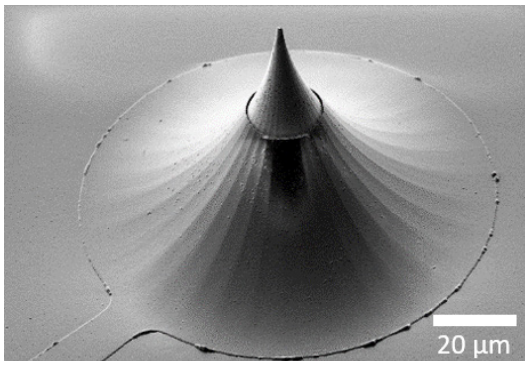
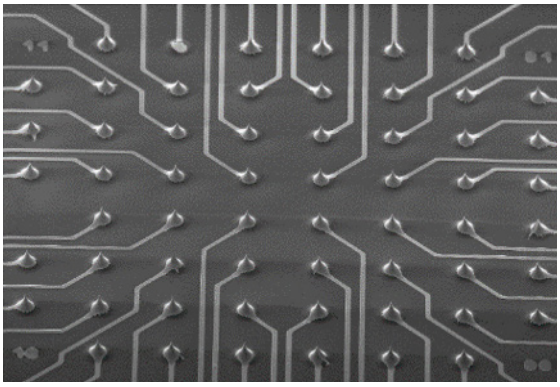




3D Microelectrode Arrays

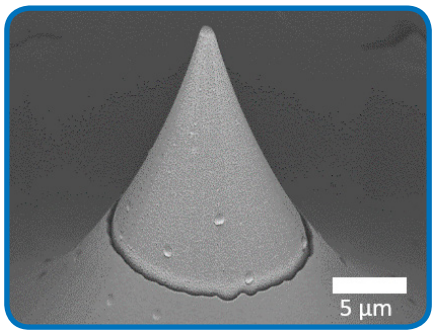
for 3D cell culture, tissue slices and cell clusters

- 3-dimensional recording sites
- Low impedance, low noise
- Identical materials as in standard MEAs
- Ideal for 3D-cell culture, tissue slices and cell clusters

multichannel systems
Innovations in Electrophysiology

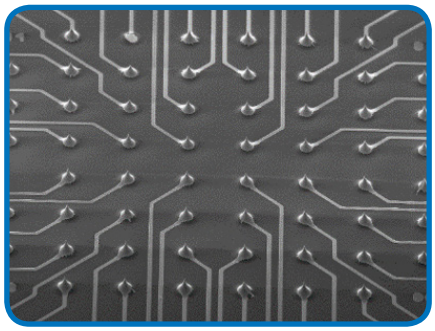
Recording inner cell layers

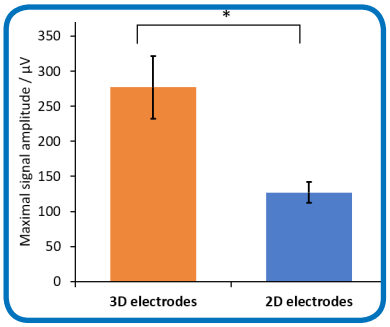
Planar microelectrode arrays reach their limits when it comes to tissue slices or cell clusters. The outer cell layer often contains dead cells which shield the cell signals of inner cell layers from the electrodes. The 3D electrodes of this new type of MEA penetrate 50 to 100 µm deep into the tissue and make recording from inner cell layers possible.



3D cell culture demands for 3D recording devices

As standard cell culture techniques expand to the third dimension, electrophysiological devices need to follow. With this new 3D MEA it is possible to record and stimulate as much as 50 to 100 µm away from the surface.





Kleber, 2014: signals from hippocampal slices are enhanced by using 3D MEAs

Key features

- Glass based
- TiN electrodes (same as standard MEA)
- SiN insulator (same as standard MEA)
- Electrode size 12 µm (bottom)
- Electrode height: 50-100 µm
- Electrode spacing: 100-200 µm

For complete solutions for electrophysiology visit:
www.smart-ephys.com

Smart Ephys | multichannel systems
a division of Harvard Bioscience, Inc.

Made in Germany

Multi Channel Systems
MCS GmbH
Aspenhaustrasse 21
72770 Reutlingen
Germany
Phone +49-7121-909 25-25
Fax +49-7121-909 25-11
sales@multichannelsystems.com
www.multichannelsystems.com