

A FLEXIBLE PROBE

Patient need addressed

Neurological disorders

The Solution

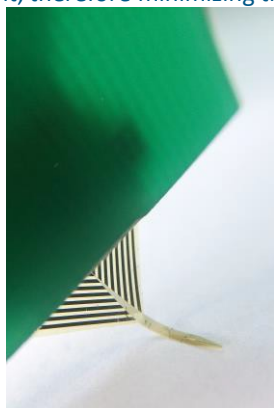
Increasing the number of sensors and actuators integrated in any flexible probes, such as thin-film probes, is an important objective in biomedical technology, and in particular in neurotechnology for the monitoring and control of neural activity with high spatial resolution.

The present invention relates to a flexible probe, where active elements are interconnected in order to implement a multiplexing technique, allowing to implement arrays with high aspect ratios, reducing the probe and connector footprints while integrating an increased number of active elements.

Innovative Aspects

This innovative technology provides an alternative to the state of the art which covers the gaps found therein, by providing a flexible probe allowing to implement multiplexed active matrixes to increase the number of sensors and/or actuators in an active area of the probe with a high aspect ratio.

This flexible probe comprises a new way for the routing of the interconnection, which allow the implementation of epicortical neural probes with one or multiple strips as well as depth probes (such as DBS or intracortical probes) increasing their spatial resolution while improving their conformability with curved surfaces and/or minimizing their cross-section and footprint, therefore minimizing their invasiveness.



Stage of Development: Successful proof of concept, lab prototype under development

Intellectual Property

European patent application (Priority date: July 30, 2021)

Available for:

- Licensing
- Further development



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