

Flexible, transparent electrodes for acute recording in non-human primates

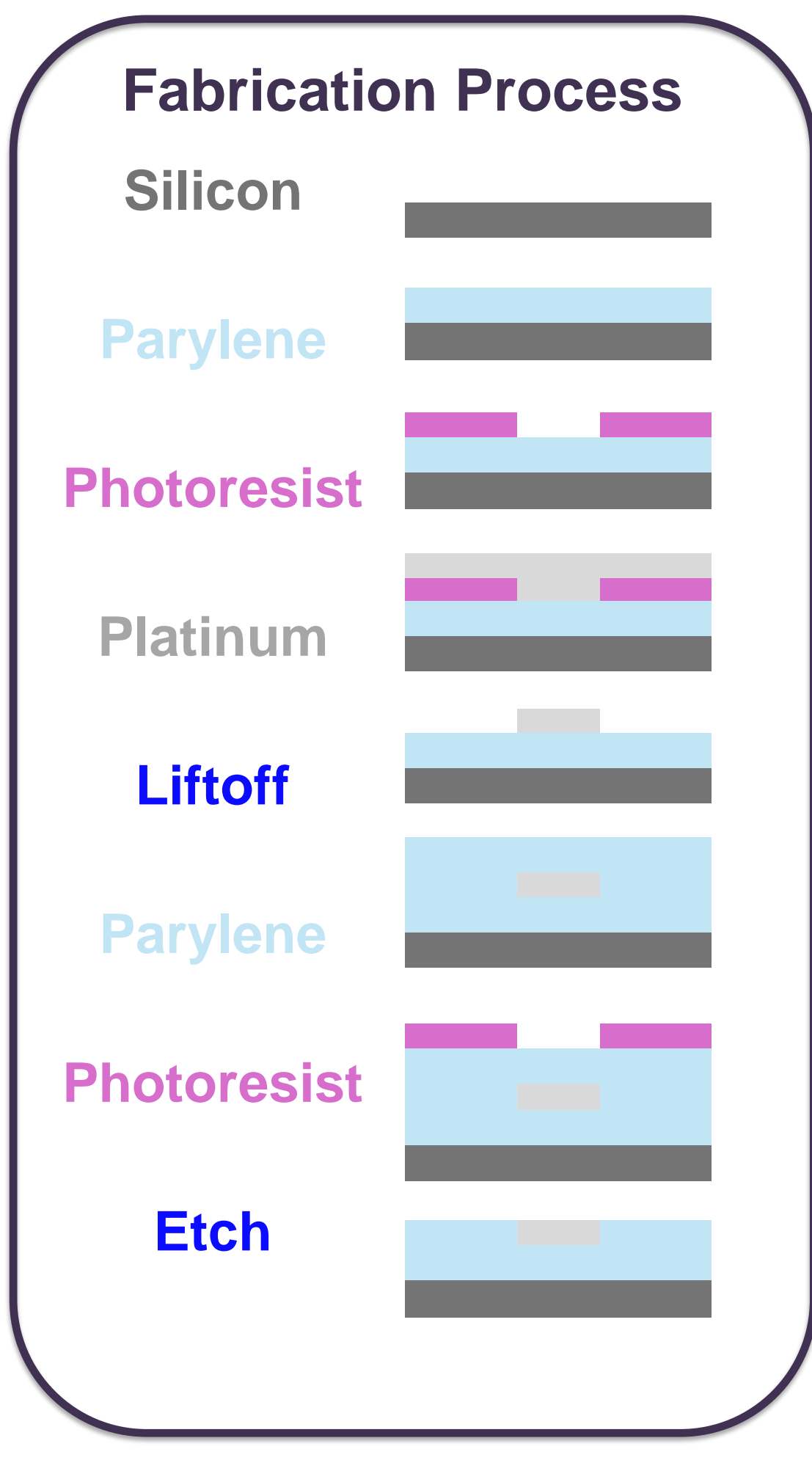
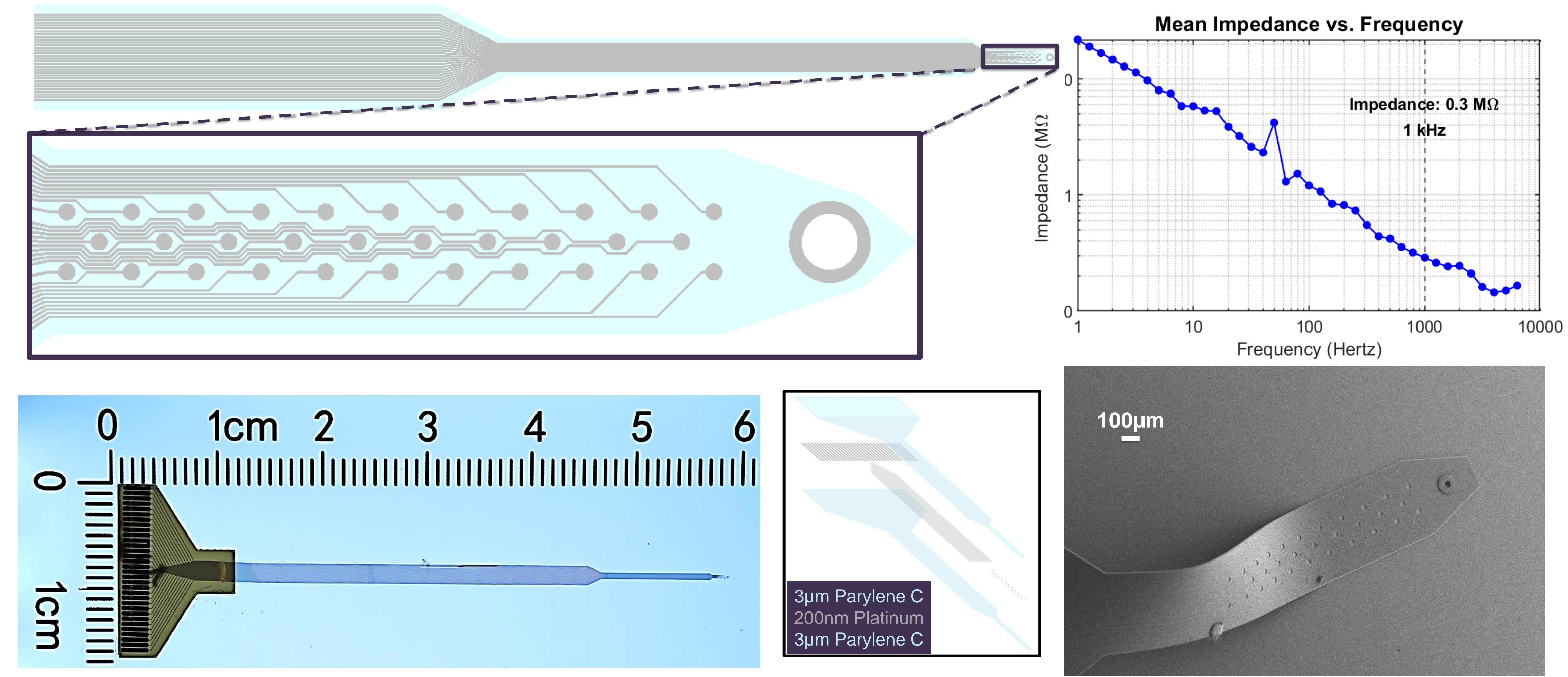
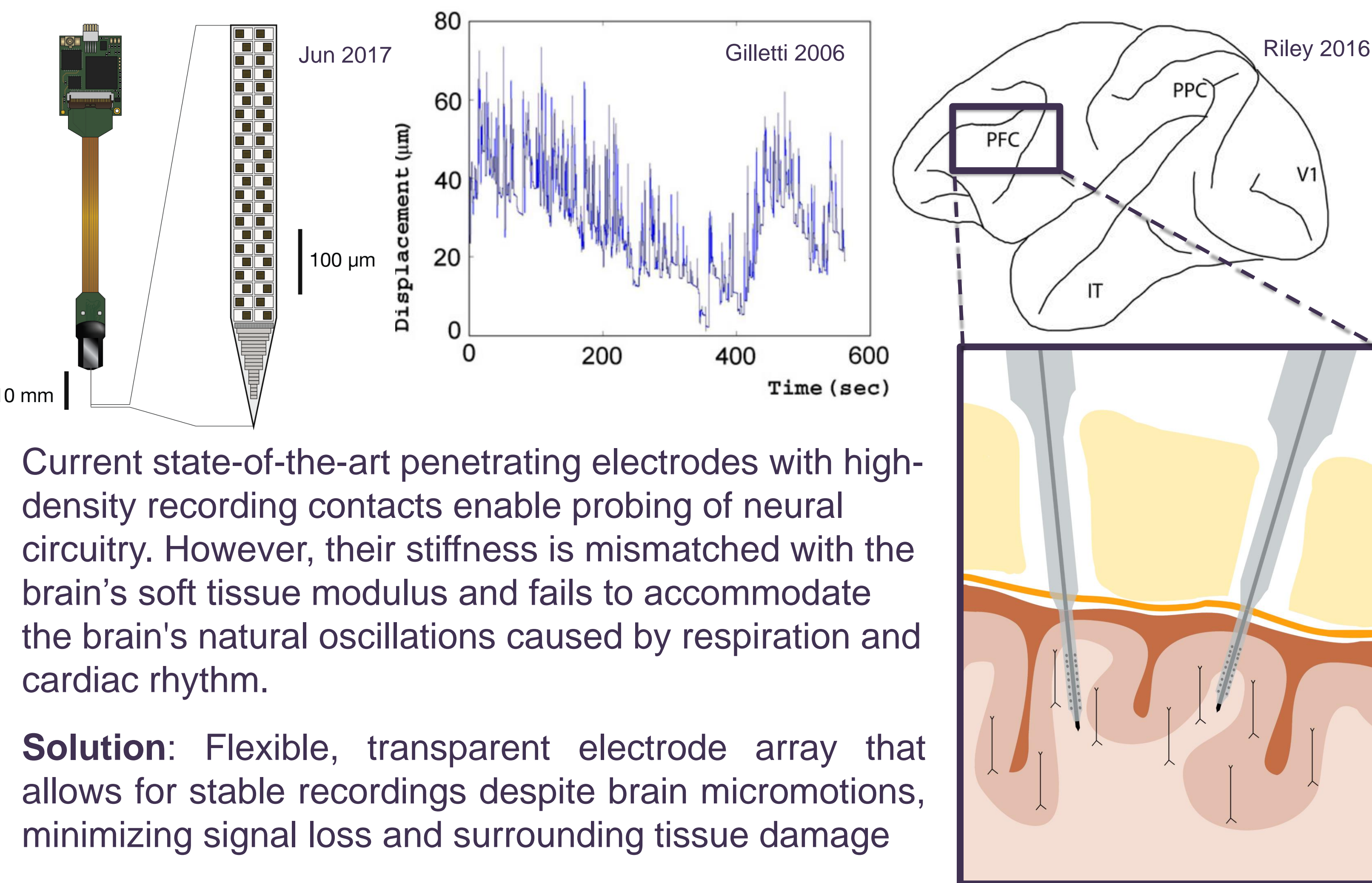
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Introduction & Background

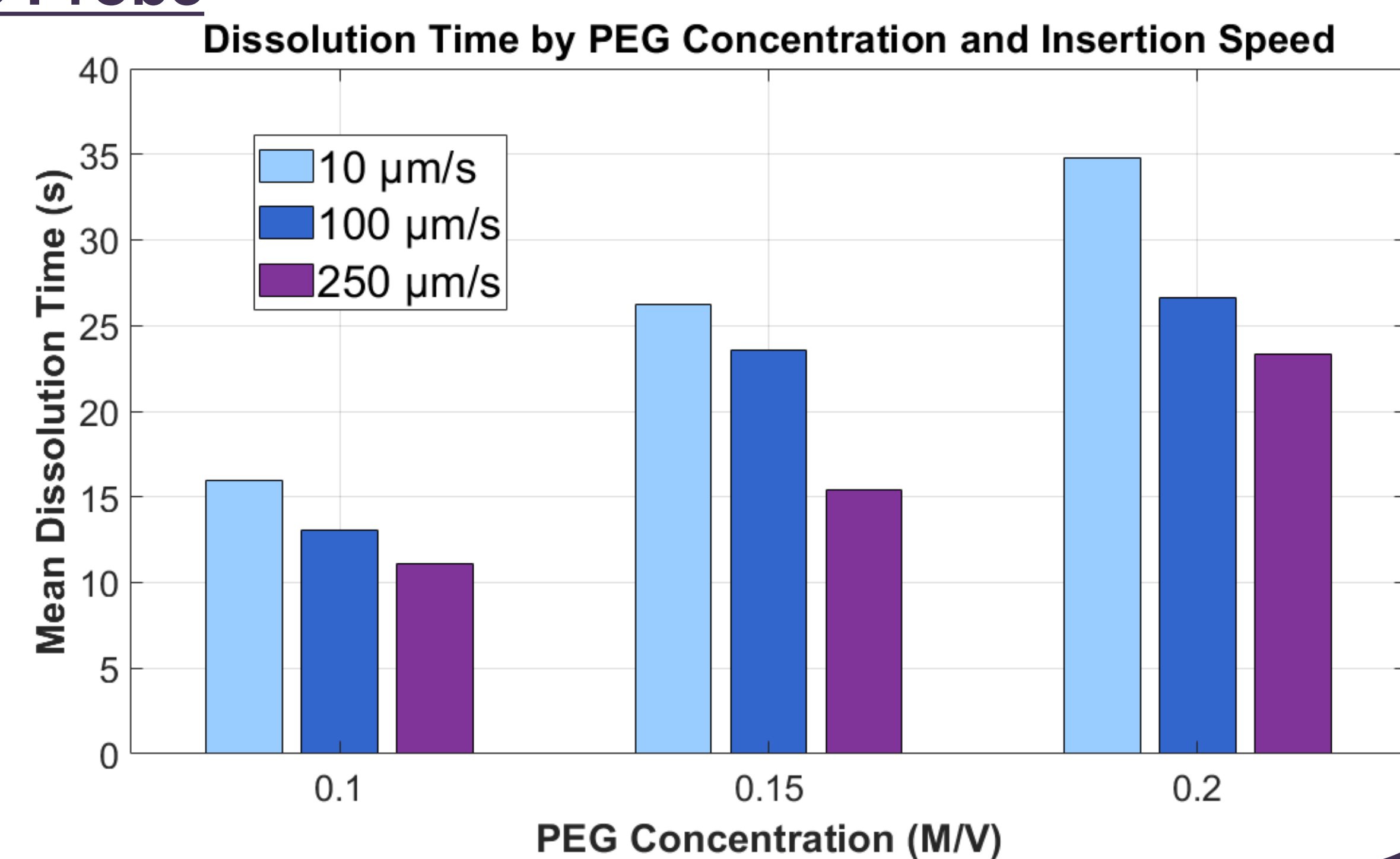
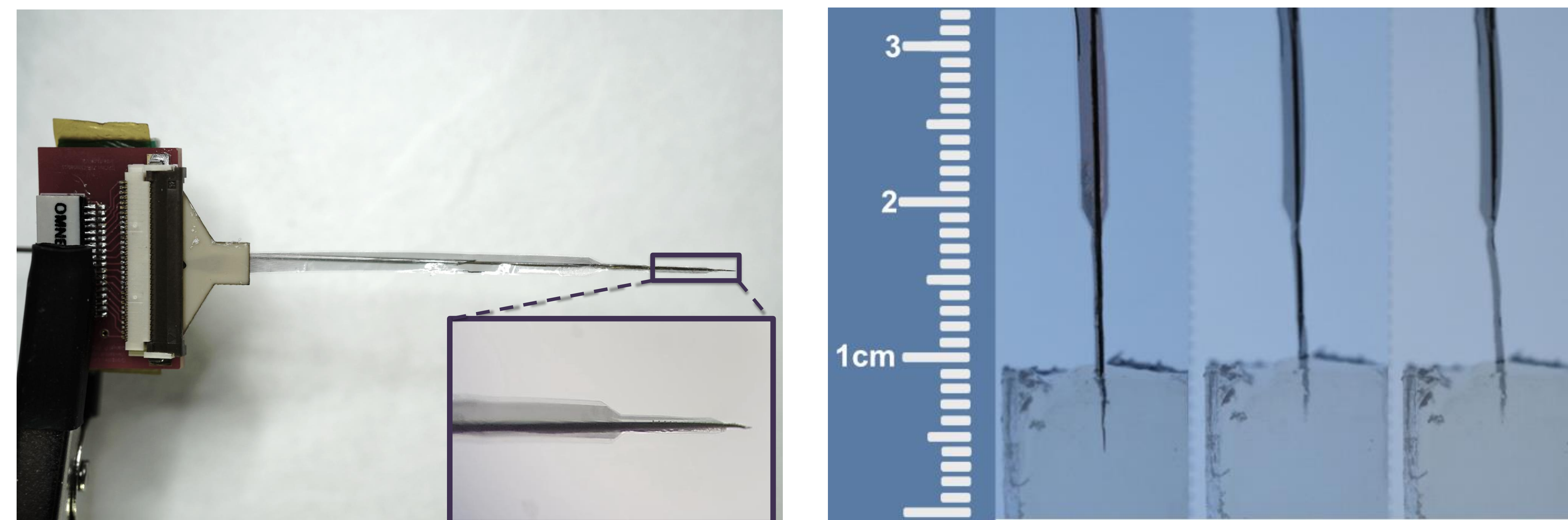
Probe Design and Fabrication



Probe Insertion and In Vivo Rodent Recordings

Conclusion & Future Directions

Microwire Adhesion to Flexible Probe

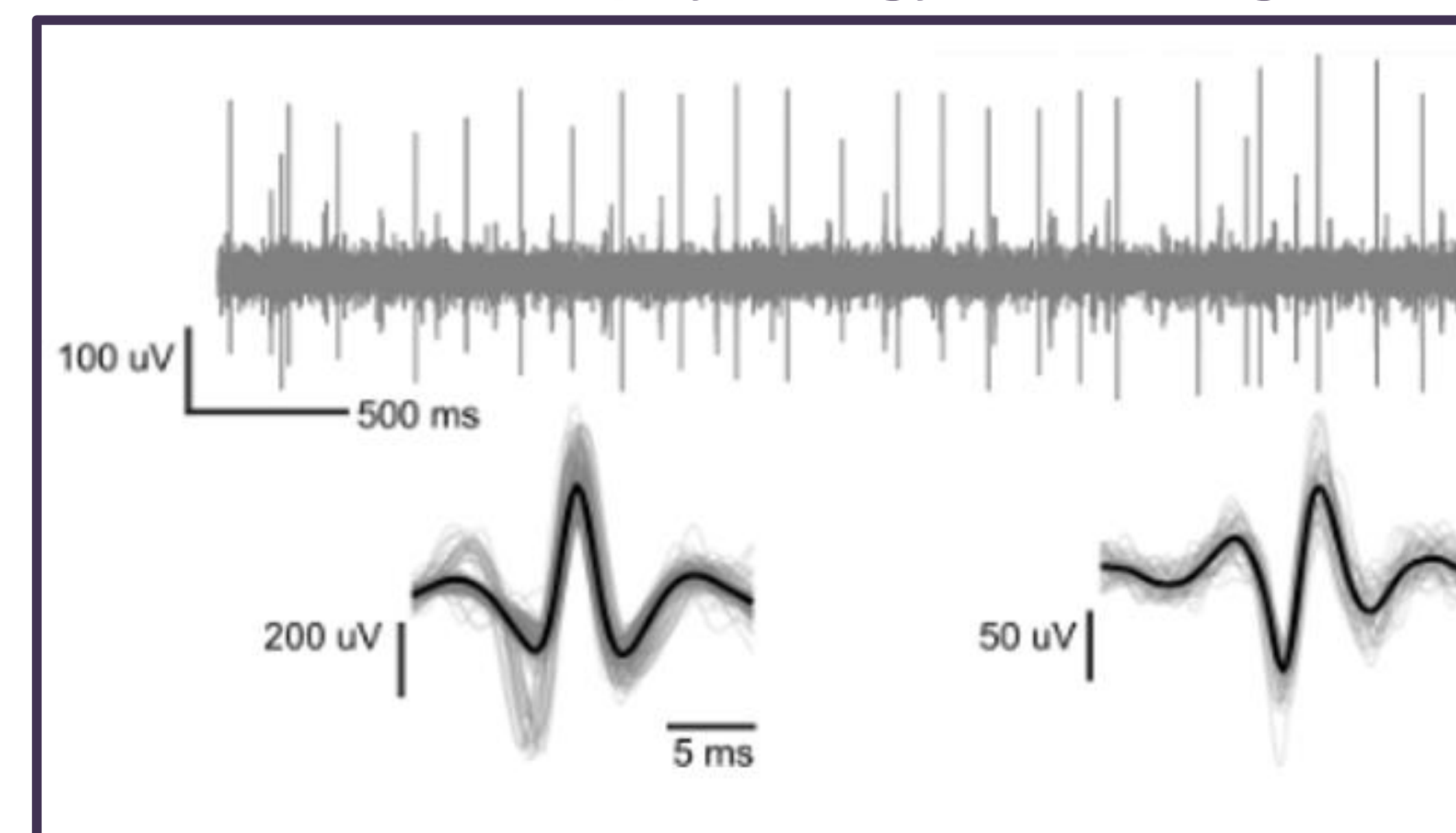
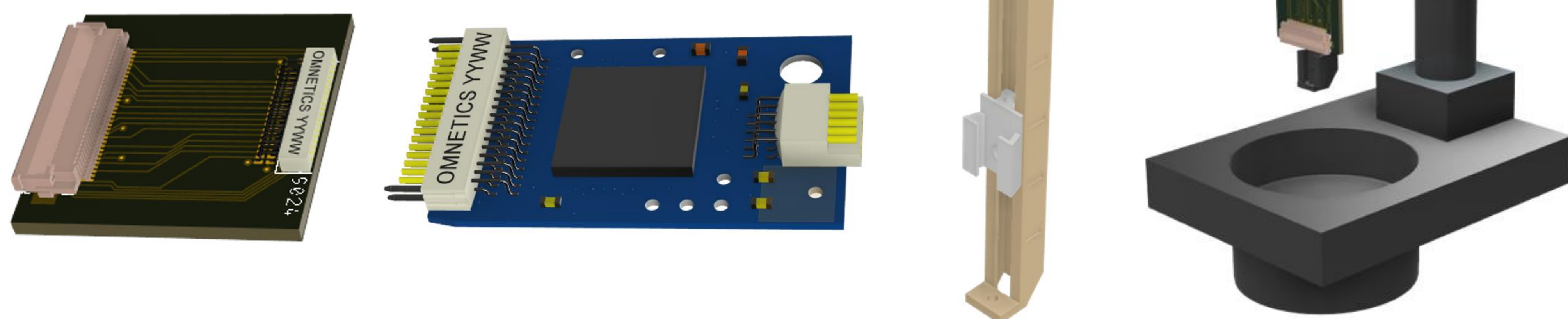


Leveraging nanoscale fabrication of platinum deposition onto Parylene-C results in a robust, flexible electrode capable of recording single units, while maintaining optical transparency, and can be reliably shuttled into tissue with minimal damage and high mechanical stability.

Nonhuman Primate Probe Mock Penetration

Acute Electrophysiology Recording

Custom built printed circuit boards interface the recording headstage with our flexible probes, and all fit to a custom adapter for NHP tower micromanipulators



- These probes will be acutely inserted into NHP prefrontal cortex to assess recording stability
- We will test probe insertion speed and dissolution with poly-vinyl alcohol, an alternative adhesive
 - We will perform acute nonhuman primate test penetrations to verify mechanical stability through dura
 - Acquire preliminary recordings from NHP prefrontal cortex during behavioral task to identify relevant neurons for working memory
 - Compare waveforms and recording stability to silicon-based probes used in NHP recordings

Acknowledgments

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