

Silicon Neural Probes: Features, Advantages & Benefits

Our next-generation silicon neural probe technology offers exceptional performance for both acute and chronic experiments, encompassing:

Superior chronic stability...

...unrivalled in vivo longevity - record the neurons you want across many days to weeks in freely behaving animals.

Optogenetics-safe...

...the only silicon neural probes on the market with minimized sensitivity to photo-electric artefacts making them the optimal choice for single unit recording + optogenetics.

Best-in-class signal to noise ratio...

...stabilised electrodes with typical 50 kOhm impedance; ~2x - 10x better than the competition!

Microdrive compatible...

... designed to fit our nano-Drives with guaranteed alignment with drive-axis and convenient co-alignment with fibre optics and fluidic cannulae.

Ultra-thin yet robust...

...15 micron thin silicon neural probes with narrow shank-width for minimal tissue damage yet still able to withstand considerable stress without breaking.

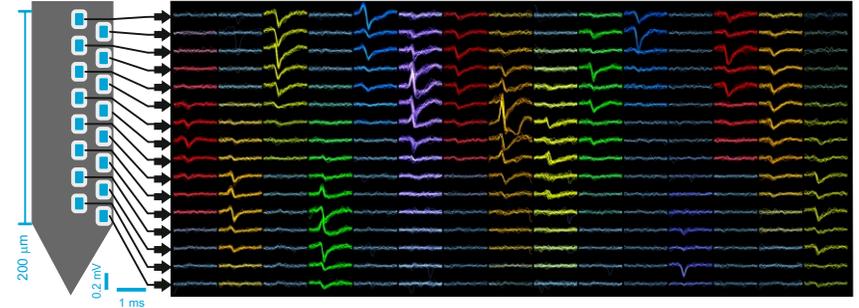
Long-term reusable...

...acute probes offering multiple re-uses across many months.

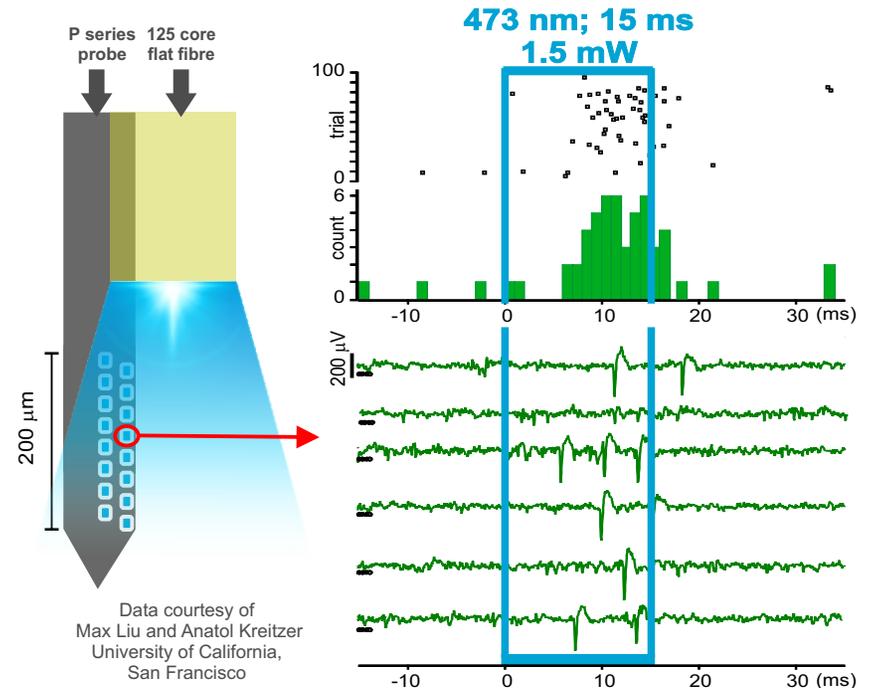


I got beautiful 'multi-multi' single cell recordings using both your 32 channel and 64 channel probes in rodents. The recording quality was truly incredible with huge spikes all over the place; definitely some of the best recordings I have seen using silicon probes so far!!

Nicolas Mallett, Lab Head, University of Bordeaux, France.
Brain area: Striatum and globus pallidus; Species: Rats and Mice



Spike-sorted single unit data from freely behaving rat cortex - recorded 60 days post-implant and after 30 days in the same location. Data provided by Tahl Holtzman, Nick Donnelly, Jeff Dalley – University of Cambridge, UK



Data courtesy of Max Liu and Anatol Kreitzer University of California, San Francisco

Data recorded from the posterior striatum in the awake head-fixed mouse using an Ai32 mouse line crossed to the Adora2A Cre line; a marker of indirect pathway medium spiny neurons (MSNs) which in turn express ChR2 - note photo-evoked spikes. Recorded with a P-series probe closely apposed to 125 core fibre optic cannula