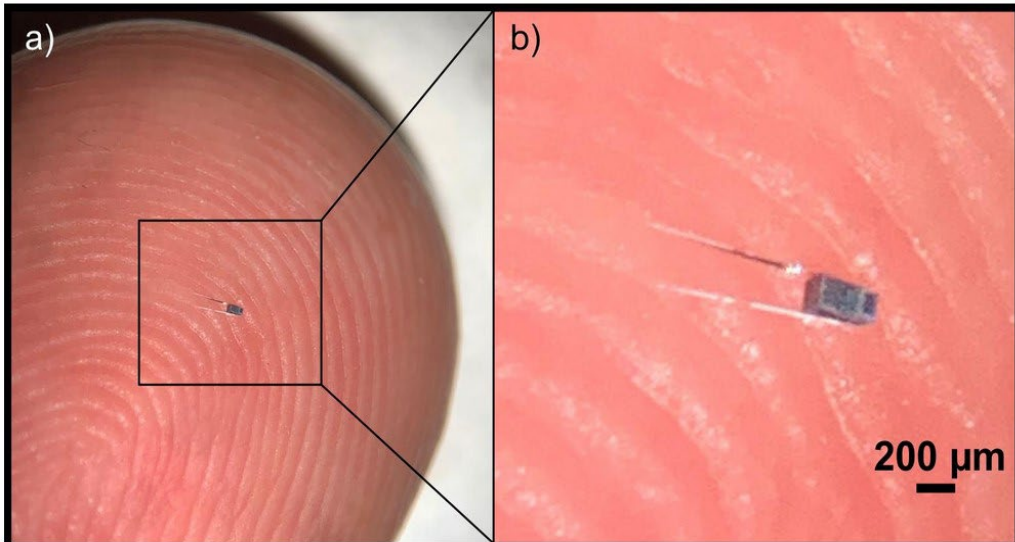


# Bodily implantable CMOS-compatible microelectrodes



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Intellectual Property

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## Description

Neural interface technologies aim to enhance implantable devices for medical and research purposes by integrating microelectrodes with electronic units. However, current methods struggle with reproducibility, scalability, and mechanical stability. This invention proposes a groundbreaking approach by fabricating microelectrodes and electronic units as a single structure using CMOS technology, addressing these limitations and setting new benchmarks in the field.

## Advantages

The invention provides exceptional mechanical stability, optimal electrical impedance, and high reproducibility, eliminating user-dependent errors. The CMOS-based fabrication ensures high fabrication yield and scalability, allowing for customizable designs, shapes, and materials without sacrificing efficiency or reliability, including multichannel configurations in minimal space. Moreover, the reproducibility and user independence is enhanced by eliminating manual alignment challenges.

## Applications

- Neural implants for neurostimulation and brain-machine interfaces.
- Advanced prosthetics and sensory devices.
- Medical diagnostics and monitoring devices implanted in the body.