

[Home](#) / [Image Of The Day](#)

Image of the Day: Imposter Neurons

Researchers have implanted electronics masquerading as neurons in the brains of mice.

Mar 1, 2019
CAROLYN WILKE

1

Typical brain implants with relatively large, stiff neural probes can provoke an immune response, leading to inflammation and scar tissue that may impair the electrodes' function. Now, researchers have developed sinewy sensors that mimic real neurons to less obtrusively study brain activity, they reported February 25 in *Nature Materials*.

ABOVE: Neuron-like electronics (red) mimic the shape, size, and flexibility of neurons (green).
XIAO YANG (LIEBER LAB)

The probes each have a head similar in size to a neuron's cell body, where the electrode resides, and a filamentous tail, formed of wire sheathed in a polymer casing, that resembles a neurite. The scientists injected their imposter neurons into the hippocampus of several mice and found that the probes integrated into the network of neurons in their brains and caused negligible immune responses, according to the authors.

X. Yang et al., "Bioinspired neuron-like electronics," *Nature Materials*, doi:10.1038/s41563-019-0292-9, 2019.

Keywords:

bioinspiration, brain, Brain activity, electronics, Image of the Day, implants, multimedia, neurons, neuroscience