Enhanced Infrared Neural Stimulation Using Localized Surface Plasmon Resonance of Gold Nanorods
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Nerve Cells
An advanced optical stimulation of in vivo peripheral neural tissues based on pulsed infrared light and gold nanorods is demonstrated by M. Byun, S. B. Jun, S. J. Kim, and co-workers. The platform, described on page 3853, can provide a significant improvement in terms of a neural responsivity and a threshold stimulation level, therefore reducing the requisite radiant exposure and the concern for tissue damage. It is expected that the proposed plasmonic stimulation could open up new possibilities for applications for non-invasive investigations of diverse excitable tissues and treatments of neurological disorders.