Microelectrode

A microelectrode is an electrode of very small size, used in electrophysiology for either recording of neural signals or electrical stimulation of nervous tissue. Initially, pulled glass pipette microelectrode was used with later introduction of insulated metal wires. These microelectrodes are made from inert metals with high Young modulus such as tungsten, stainless steel, platinum and iridium oxide and coated with glass or polymer insulator with exposed conductive tips. More recent advances in lithography yielded to silicon based microelectrodes.

see Microelectrode recording.

Neurons produce action potentials that are referred to as 'spikes' in laboratory jargon. Frequently this term is used for electrical signals recorded in the vicinity of individual neurons with a microelectrode (exception: 'spikes' in EEG recordings)