

Special Issue

Intracranial Electrodes for Epilepsy: Fabrication, Applications and Indications

Message from the Guest Editors

Intracranial electroencephalography (EEG) is an essential neurodiagnostic tool for studying people with epilepsy whose seizures cannot be controlled with antiseizure medications. Invasive EEG monitoring provides epileptologists with the ability to accurately identify the brain region(s) where seizures originate and subsequently spread. Source localization techniques can assist with such a determination. Additionally, neuroscientists can utilize invasive EEG recordings to study the basic science of epilepsy, both on a macroscopic and microscopic level. Another evolving application of intracranial electrodes is for neurostimulation treatment of refractory epilepsy through neuromodulation of the abnormal epileptogenic networks. The design and manufacturing of macro- and microelectrodes which can be utilized to obtain high-quality intracranial EEG recordings and to effectively treat medication-refractory epilepsy is crucial. This Special Edition of *Micromachines* will be dedicated to the design, fabrication, applications, and indications for intracranial electrodes in epilepsy.

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