



Microelectrode Arrays (MEAs) for In-vitro Recording



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Abstract:

Neuroscientists employ cultured neuronal networks to study different aspects like synaptogenesis, nerve regeneration, axon guidance, neural plasticity and etc. Different systems have been used to investigate cultured neurons. One of the most popular technologies which has been developed for this purpose is microelectrode array (MEA) technology. In these devices neurons are cultured on the bottom of a special dish which is capable of sensing and recording biopotentials generated by them. In most of the cases microfabrication technology is being employed to create these systems. MEAs provided valuable spatiotemporal information about neural networks and increased our knowledge about the cellular-level connections and processes of the neurons. In this presentation a review on the MEA systems and their applications is reported.

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