Paper Title: A study on the characteristics of CNT for the development of a long-term neural recording

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Abstract

In comprehending the intricacies of the brain, neuroplasticity plays a pivotal role. To delve into this phenomenon, it is imperative to engage in prolonged recording of neuronal cells. However, existing apparatuses have constraints in terms of their suitability for living organisms and their electrical attributes, leading to a maximum recording period of twelve months. Overcoming this hurdle necessitates a substance that excels in both biocompatibility and electrical characteristics. Carbon nanotubes (CNTs) emerge as a promising candidate to meet this need. This investigation centers on validating the attributes of CNTs that enhance electrode electrical properties through the utilization of polydopamine/polyethyleneimine for augmenting CNT adhesion.