Electrochemical Analysis of Nicotine Based on Multi-Walled Carbon Nanotube/Graphene Composite

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doi: 10.20964/2016.06.68

Received: 23 March 2016 / Accepted: 13 April 2016 / Published: 4 May 2016

In this article, multi-walled-carbon nanotube/graphene hybrid (MWCNT-G) was prepared by directly adding graphene powder to the surface functionalized multi-walled carbon nanotubes (MWCNT) dispersion. The morphology of the MWCNT-G was observed using SEM and TEM. Observation found the MWCNT-G represented a network morphology, which is beneficial for the electrochemical reaction. Therefore, the MWCNT-G was used for commercial electrode surface modification. The electrochemical performance of the modified electrode was tested by electrochemical determination of nicotine.

Keywords: Multi-walled carbon nanotube; Graphene; Hybrid; Electrochemistry; Nicotine; Sensor

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