

## Characterization of Graphene Oxide Coated Gold Electrodes for Bioimpedance Measurements

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**Abstract :** In this study, the impedance spectroscopy is used as a detection tool in order to characterize surface coating with graphene oxide. Gold electrodes are produced by standard lithography procedures and then coated with graphene oxide using self-assembly method. The impedance of redox solution through bare gold electrodes and graphene oxide coated gold electrodes is measured in the low and high frequency range. The graphene oxide coating reduces the impedance value of the gold electrode and this reduction is distinguishable in the low-frequency range.

**Keywords :** bioimpedance, electrode characterization, graphene oxide, gold electrodes, impedance spectroscopy

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