Short Communication

Biomolecules Behavior on a Surface of Boron Doped/un-doped Graphene Nanosheets

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Recently, carbon-doped nanomaterials attract attention due to their unconventional properties as doping completely changes their properties. Herein, we try to compare the electrochemical response of the prepared boron-doped graphene nanosheets and un-doped graphene nanosheets modified glassy carbon electrodes toward some interesting biomolecules like ascorbic acid, uric acid, and dopamine. There are significant differences of prepared doped and un-doped graphene nanosheets toward the mentioned biomolecules. The resistance of surfaces toward fouling was studied on uric acid oxidation product in the long term. In the long term stability of the prepared materials, there are no significant differences found. As electrochemical materials, the differences between prepared materials will affect their applications.

Keywords: Biomolecules; Boron Doped graphene nanosheets; Biosensors

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