

Graphene-based Electrochemical Sensors for Pharmaceutical and Clinical Applications

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Abstract

Following its discovery in 2004, graphene and graphene-based nanostructures have attracted considerable attention in various fields, which include but not limited to medicine, electronics, energy, environment and sensors [1-5]. Electrochemical sensing platforms based on graphene-related nanomaterials provide us with remarkable properties such as high specific surface area, enhanced electrical conductivity, abundant electron transfer sites, good electrocatalytic activity, along with high precision and fast response time. To this end, graphene (pristine or composites) has been exploited for the construction of various electrochemical sensors. The present presentation aims to give a brief introduction to the potential applications of graphene-based hybrid nanomaterials for electrochemical sensing applications for various analytes, including pharmaceutical substances like drugs as well as biologically active molecules such as glucose

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Biography

Elham Asadian received a PhD degree in Nanoscience and Nanotechnology from Sharif University of Technology (SUT) in 2016 and served as a postdoctoral researcher in the Institute for Nanoscience and Nanotechnology (INST) at SUT from 2016 to 2019. She joined Shahid Beheshti University of Medical Sciences (SBMU) in 2019, where she holds the position of Assistant professor in the field of Medical Nanotechnology. Her scientific interests are focused on the electrochemistry of nanomaterials, development of electrochemical (bio)sensors, bionanotechnology, electroanalytical chemistry and drug delivery systems