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Facile Synthesis of Au@α-Fe_2O_3@RGO Ternary Nanocomposites for Enhanced Electrochemical Sensing of Caffeic Acid toward biomedical applications

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Abstract

Demonstrated herewith is a novel eco-friendly Au@α-Fe_2O_3@RGO ternary nanocomposites using chlorophyll as reductants and stabilizers. Systematic characterizations studies confirm Au and α-Fe_2O_3 nanoparticles are uniformly decorated on the surfaces of reduced graphene oxide (RGO) nanosheets. As a proof-of-concept, the developed Au@α-Fe_2O_3@RGO ternary nanocomposites were coated on a glass carbon electrode (GCE) and