An electrochemical sensor based on RGO-Co_3O_4 for determination of glucose in human blood serum

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Reduced graphene oxide (RGO) incorporated onto metal-organic framework (MOF)-derived Co_3O_4 hexagons is prepared via a hydrothermal route for glucose sensor applications. Furthermore, the RGO-Co_3O_4 hexagon-modified electrode was optimized to realize the reliable amperometric determination of glucose concentration with a very low detection limit and excellent sensitivity value of 0.4 μM and 1.315 mA mM^{-1} cm^{-2}, respectively. Also, the proposed non-enzymatic sensors showed good storage stability, and repeatability and reproducibility for the determination of glucose in biological samples.