

Synthesis and characterization of GOD immobilized- Fe_3O_4 complexes($\text{Fe}_3\text{O}_4@/\text{SiO}_2/\text{Rudpp}-\text{NH}_2=\text{GOD}$)

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Iron oxide (Fe_3O_4) are synthesized and coated with tetraethoxysilane (TEOS) and ruthenium complex (Rudpp). Synthesized Fe_3O_4 complexes ($\text{Fe}_3\text{O}_4@/\text{SiO}_2/\text{Rudpp}$) were functionalized with 3-(aminopropyl)triethoxysilane (APTES) and were immobilized with glucose oxidase (GOD). The properties of the GOD immobilized- Fe_3O_4 complexes ($\text{Fe}_3\text{O}_4@/\text{SiO}_2/\text{Rudpp}-\text{NH}_2=\text{GOD}$) were investigated. GOD immobilized- Fe_3O_4 complexes have considerable magnetism, fluorescent properties, long-term stability and high enzymatic activity. They can be used for applications in biological areas such as biomedicine, drug delivery and magnetic resonance imaging.