Immobilization of *Glucose Oxidase* in the organic-inorganic hybrid xerogels

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Glucose Oxidase(GOD) is specific for the catalysis of oxidation of *β-D(+)-Glucose*. The enzyme and its source such as *Aspergillus niger* species is used for the biological production of *Gluconic Acid*, as the enzyme catalysis the oxidation of glucose to gluconic acid. GOD is immobilized in organic-inorganic hybrid xerogel by two step sol-gel process. The precusors used are vinyltriethoxysilane (*VTES*), methyltriethoxysilane(*MTES*), n-propyltriethoxysilane(*n-PTES*), and phenyltriethoxysilane (*PhTES*). The acitivity of immobilized GOD is measured by auto-titration method. The type and composition of precusors are varied to study their effect on the GOD activity. It is found that adding organic groups in xerogel increases the activity of GOD. Finally, the activity of immobilized GOD is compared native GOD.