

Enhancement of fiber-SPR sensor utilizing graphene oxide

ABSTRACT

A graphene oxide layer deposited on top of a thin gold film of a fiber optic surface plasmon resonance sensor is investigated. Comparison is made on the sensing performance of modified sensor and a standard gold coated fiber optic surface plasmon resonance sensor. The graphene oxide coated sensor shows high sensitivity of approximately 400 nm/RIU to surrounding refractive index when tested with different liquids.

Keyword: Surface plasmon resonance; Graphene oxide; Miniature sensors; Fiber optic sensors