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Review Article

Surface Plasmon Resonance-Based Fiber Optic Sensors: Principle, Probe Designs, and Some Applications

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Abstract

Surface plasmon resonance technique in collaboration with optical fiber technology has brought tremendous advancements in sensing of various physical, chemical, and biochemical parameters. In this review article, we present the principle of SPR technique for sensing and various designs of the fiber optic SPR probe reported for the enhancement of the sensitivity of the sensor. In addition, we present few examples of the surface plasmon resonance- (SPR-) based fiber optic sensors. The present review may provide researchers valuable information regarding fiber optic SPR sensors and encourage them to take this area for further research and development.