Several factors affecting the performance of fiber optic SPR sensors

We thoroughly evaluate four different taper profiles for fiber-optic surface plasmon resonance (SPR) sensors.

This review thoroughly analyzes and compares the structure, excitation effect, sensing performance, and the advantages and disadvantages of each type of multichannel fiber optic SPR ...

In order to develop a method to obtain OF-LSPR sensors with high reproducibility, we studied the effect that factors such as temperature, AuNPs concentration, fiber core size and time of...

This paper mainly reviews the research results on temperature self-compensating fiber-optic surface plasmon sensors. Firstly, it introduces the mechanism of a temperature self ...

This article outlines methods to improve the performance of optical fiber SPR sensing, such as sensitivity, detection limit, detection range, and specific selectivity.

Due to the benefits of the high sensitivity, real-time response, no labeling requirement, and good selectivity, fiber optic sensors based on surface plasmon resonance (SPR) have gained popularity in ...

In this work, for the first time, the application of Principal Component Analysis (PCA) to process Surface Plasmon Resonance (SPR) spectra is proposed to effectively overcome these ...

In this chapter, we look at how, over the past three decades, the surface plasmon resonance sensor has outperformed the more traditional interferometric method.

This review outlines approaches in improving the fiber SPR sensing performance, e.g., sensitivity, detection accuracy, reliability, cross-sensitivity, selectivity, convenience and efficiency, ...

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