

# **Fiber Evanescent Wave Sensing Sequencing**





## Overview

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The review article presents the advancements occurred in the area of fiber optic evanescent wave (FOEW) sensors in the past decade (2007–2018).



## Fiber Evanescent Wave Sensing Sequencing

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### **Fiber optic evanescent wave absorption-based sensors: A**

The review article presents the advancements occurred in the area of fiber optic evanescent wave (FOEW) sensors in the past decade (2007-2018). The fundamental working

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### **Recent advances in fiber-optic evanescent wave sensors for monitoring**

Fiber-optic evanescent wave (FOEW) sensors are promising in pollutant detection and evaluation of water quality because of their high resistance to corrosion, smart structure, anti

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## **Research Progress on Evanescent Wave Sensor Based on Mid**

Fiber sensors based on the principle of evanescent waves are widely used in liquid, gas, and biochemical sensors due to their high sensitivity, fast response speed and low cost. Meanwhile, mid

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## **Evanescent Wave Absorption Based Fiber-Optic Sensor**

Various geometries of fiber probe designs, like bent, tapered, coiled, etc., have been explored for improving the sensitivity. This chapter describes the design, development and fabrication of a novel

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## **Novel Approach for Design of Fiber-Based Evanescent**

In this paper, a theoretical approach based on electromagnetic theory of optical fibers is



used for analysis and optimisation of sensing elements of the

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## **Development of Embedded Fiber-Optic Evanescent**

The development, fabrication, and embedment of fiber-optic evanescent wave sensors (FOEWSs) to monitor the state of charge (SOC) and

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## **Platform for Evanescent Wave Sensor Fabrication Based on 3D**

This paper describes the low-cost manufacturing process of an evanescent wave fiber sensor platform that allows the etching of the fiber in hydrofluoric acid with the proposed 3D-printed fiber holder in an

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## **Nucleic acid functionalized fiber optic probes for sensing in**

Nucleic acid functionalized evanescent wave fiber optic (EWFO) biosensors have attracted much attention due to their remarkable advantages in both device configuration and sensing performance.

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## **Highly sensitive evanescent wave SERS probe based on exposed**

In this study, we developed a convenient and effective method for the fabrication of evanescent wave fiber surface-enhanced Raman scattering (SERS) probes constructed with ordered silver

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## **Fiber optic evanescent wave absorption-based sensors:**

The review details advancements in fiber optic evanescent wave sensors from 2007 to



2018. Different geometries like straight, tapered, U-shaped,

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## **All -- Fiber Evanescent Wave Sensors for the Mid-Infrared**

Methods of the mid-IR spectroscopy provide reliable tools for detecting chemical composition of gases and liquids. In the mid-IR spectral range (wavelengths of 3-25  $\mu\text{m}$ ), various molecules and functional

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## **EVANESCENT WAVE FIBER OPTIC BIOSENSORS**

This phenomenon, known as the evanescent wave, extends only to a short distance from the interface, with power dropping exponentially with distance. The evanescent wave has been exploited to allow

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## **Evanescent-Wave Fiber-Optic Sensor: On Power Transfer From Core**

In this paper, the enhancement of collection efficiency in fiber-optic evanescent-wave (EW) sensors is studied. Both theory and experimental results are presented. The key is to consider

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## **Nucleic acid functionalized fiber optic probes for sensing in**

Abstract Nucleic acid functionalized evanescent wave fiber optic (EWFO) biosensors have attracted much attention due to their remarkable advantages in both device configuration and sensing

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## **Recent Progress in Functional-Nucleic-Acid-Based**



In this review, we cover the progress of the fluorescent FNA-based FOEW biosensor since its first report in 1995. We focus on the chemical

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## **Evanescent Wave Optical Trapping and Sensing on**

Graphene sensitization of glucose-imprinted polymer (G-IP)-coated optical fiber has been introduced as a new biosensor for evanescent wave trapping on the

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## **A sandwich-based evanescent wave fluorescent biosensor for simple,**

The fluorescent probe and exosome reaction mixtures were placed on the evanescent wave sensing platform for the real-time measurement of the fluorescent signal.

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## **Highly sensitive evanescent wave SERS probe based**

In this study, we developed a convenient and effective method for the fabrication of evanescent wave fiber surface-enhanced Raman scattering (SERS)

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## **Novel Approach for Design of Fiber-Based Evanescent Wave Sensors**

In this paper, a theoretical approach based on electromagnetic theory of optical fibers is used for analysis and optimisation of sensing elements of the fiber-based evanescent wave sensors for the

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## **Evanescent wave optical-fiber sensing (temperature, relative humidity)**



Sensitive and versatile evanescent wave-sensing systems featuring polished optical fiber-based sensor designs with low-cost light sources have been developed for temperature, relative humidity, and pH

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## **Evanescent wave absorption sensor with direct-growth MoS<sub>2</sub>**

In this work, we presented a novel evanescent wave absorption sensor based on U-bent tapered multimode fiber covered by molybdenum disulfide (MoS<sub>2</sub>) film (MoS<sub>2</sub> @TU fiber EWA)

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## **Evanescent Wave**

Evanescent wave fiber optic biosensors are a subset of fiber optic biosensors that perform the sensing function along the fiber's cylindrical length. In all optical fibers, light propagates by means of total

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## **Highly sensitive evanescent wave SERS probe based on exposed**

Such fibers enable obtaining high evanescent field power on the core side and rapid liquid infiltration and offer a strong interaction of the evanescent wave with analytes and a long

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## **Machine learning-driven 3D-QSAR models facilitated rapid on-site**

Here, we introduce an evanescent wave fiber-embedded 3D optofluidic biochip (e-FOB) that enables rapid, on-site detection of 14 FQs through a broad-spectrum immunoassay. The e-FOB

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## **EVANESCENT WAVE FIBER OPTIC BIOSENSORS**



Evanescent wave fiber optic biosensors are a subset of fiber optic biosensors that perform the sensing function along the fiber's cylindrical length. In all optical fibers, light propagates by means of total

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## **Long-Path Evanescent-Wave Elastic Fiber for Liquid Level Sensing in**

Timely and accurate monitoring of intravenous infusions can effectively improve the safety and reliability of the infusion process. An optical-fiber evanescent-wave sensor is suitable for liquid-level monitoring

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## **Evanescent Wave Absorption Based Fiber-Optic Sensor**

Evanescent wave absorption (EWA) based fiber-optic sensors have found widespread applications ranging from environmental sensing to biosensing. In these sensors, optical and geometrical



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