



Promises and challenges of nanoplasmonic biosensors

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Abstract

This presentation will review basic working principles of surface-based optical biosensors - specifically focusing on metallic surface plasmon resonance (SPR) biosensors.

SPR has been the 'gold standard' for measuring receptor-ligand binding kinetics and affinities, and helped to characterize pharmaceutical compounds, biosimilar products, and recently SARS-CoV-2 receptor affinity.

We will then discuss nanoplasmonic refractometric sensors and relevant performance metrics to compare different types of sensors.

Finally we will look at recent highlights in nanoplasmonic sensing - including label-free single molecule detection - and discuss future directions.