

Our new paper in optics communication

Congratulations for the publication of paper "Highly Sensitive Biochemical sensor based on Nanostructured Plasmonic Interferometer" , by Khajemiri , S. M. Hamidi , Om. K. Suwal.

We propose a novel plasmonic interferometric sensor with a slit and surrounding rectangular grooves array on an optically thick gold film for biochemical sensing. We did finite-difference time-domain (FDTD) simulation for design optimization and analytical calculation for characterization of sensitivity in the proposed sensor. Our interferometer is functional for visible to near infrared region with maximum sensitivity of 500 nm/RIU and figure of merit 1933 at 741 nm wavelength. The peak intensity and wavelength change in different refractive indices. In conclusion, the results obtained in the present study indicate the potential of the proposed plasmonic interferometer as a low cost, compact, and label-free high-throughput device.



