

the complete dispersion relations of the SPs and presents a novel way of acquiring massive amount of information related to light-scattering and direct mapping of the EM-wave induced phenomena. In the presented case, we showed the particular application for the measurement of SPR and tracking of the peak in a 3D space. The additional dimension of the SPR effect, measured with scalable precision, allows increasing the precision of the tracking, reveals anisotropic surface interactions and provides spectroscopic response of the SPR effect. Our future work will be oriented towards the further improvement of the experimental setup and acquisition methods in order to increase the precision, throughput and ease of access of the instrumentation. Sensitivity calibrations for biochemical agents will also have to be studied.

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