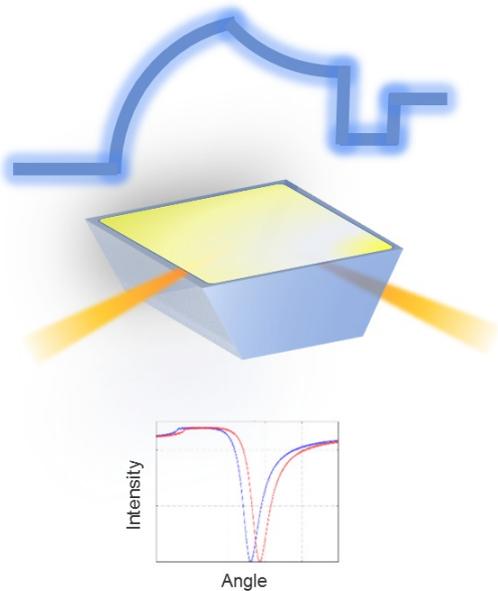


SPR Sensors



Surface plasmon resonance (SPR) spectroscopy enables label-free quantitative analysis of biomolecular interactions in real-time.

SPRs refer to evanescent waves called plasmons propagating at the interface of a noble metal and a dielectric medium. Plasmons are generated upon the resonant oscillation of electrons in the metal due to light waves with particular polarization. The generated electron charge density waves reduce the intensity of reflected light at a specific angle known as the resonance angle, which is proportional to the mass on the sensor surface.

SPR systems are used mostly in:

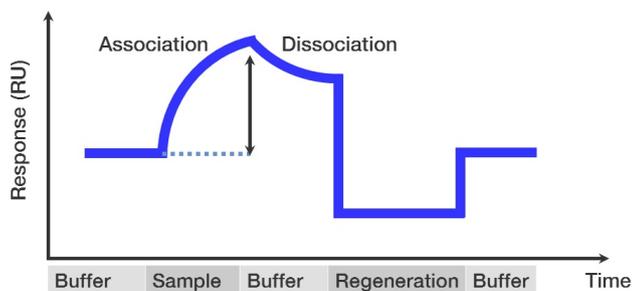
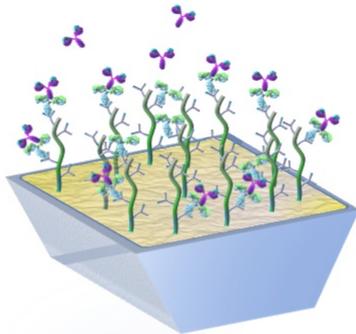
- + pharmaceutical development
- + quality control
- + drug discovery
- + life science research

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Think Label Free.



Which type of interactions can be investigated?

SPR systems can be used to investigate interactions between any kind of materials, including organic compounds, proteins, DNAs, viruses, hybrid systems of biomolecules and even non-biological samples. The response of the SPR system is proportional to the change in mass concentration and molecular weight of molecules binding to the sensor.

What data can be obtained from the sensorgram?

The data from an interaction is presented in a sensorgram which provides quantitative data on:

- + **Binding:** Does the analyte bind to the ligand?
- + **Affinity:** What is the binding strength?
- + **Specificity:** To what extent does the analyte interact with other molecules?
- + **Concentration:** How much of an analyte is present in the sample?
- + **Kinetics:** What are the association and dissociation rates?
- + **Thermodynamics:** How much are the driving forces, enthalphy or entropy of a molecular interaction?

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Our products

- + Carboxymethyl dextran sensors
- + Streptavidin sensors
- + Plasmonic metal coatings (e.g., Au, Ag, Al, ...)
- + Dielectric coatings (e.g., SiO₂, Al₂O₃, TiO₂, ...)

Instrument compatibility

LSPR AG offers SPR sensorchips compatible with major SPR instruments. Upon request, custom coatings and varying chip dimensions are available as well.

Particle-free

LSPR AG offers suitable substrate preparation prior to evaporation as our facility is equipped with devices enabling dry and wet etching. The whole process is conducted in an ISO class 5/7 cleanroom which ensures best possible quality of the product. The sensors are packed under nitrogen atmosphere, sealed in a moisture shielding metallized bag and ready to use.

Custom designed SPR sensorchips

LSPR AG can supply a wide range of multilayer coatings for various applications. LSPR AG designs custom coatings to tailor the response of the SPR chips to a wide variety of special chemistries and applications.

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