

Practicals

N°43: Optical methods and biosensors for investigation of biomolecules and their interactions: SPR and BLI

Teachers:

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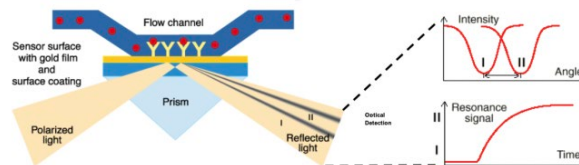
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Surface Plasmon Resonance (SPR) and BioLayer Interferometry (BLI) are methods to study and characterize the interactions properties between biomolecules and to determine their kinetic constants and affinities without any labelling.

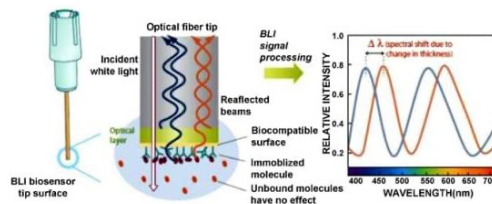
Both methods are based on biosensors on which a first molecule (the ligand) is immobilized and the binding of the second partner (the analyte) is measured during a contact phase allowed by the experimental setup.

The binding responses are measured in real-time depending of the optical method used:

- For SPR, the variations of the refractive index induced by the mass variation at the surface of the biosensor are measured



- For BLI, the variations of the thickness of biomolecular surface are measured



During practicals (1 day), the theoretic basis of both methods will be introduced and their applications will be exemplified during hands-on.