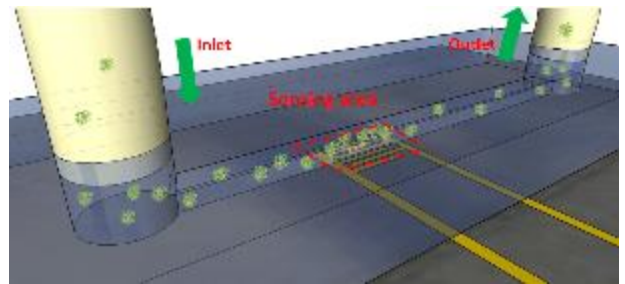


Master Thesis

Innovative functionalization schemes for nanoelectronic sensors

Specific and label-free analyte detection with enhanced sensitivity



Within a research line at our institute nanomaterials-based electronic sensors have been developed for specific analyte detection. In this thesis the aim is to improve their sensitivity by using innovative surface modifications. The first part of the work will consist on the modification of planar surfaces to validate the functionality of the surface chemistry. The second part includes the transference of the procedure to the nanosensors and the performance of the detection experiments.

The **research plan** will include:

1. Surface chemistry on planar surfaces and nanoelectronic sensors.
2. Analyte detection experiments with nanoelectronic sensors
3. Parameter adjustment according to analyzed data

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