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DEVELOPMENT OF MULTIPLEXED BIOSENSORS ON INTERFEROMETRIC OPTICAL FIBERS FOR IN VIVO MOLECULAR DIAGNOSIS

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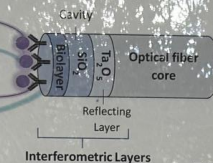
Goals

Lab-On-Fiber Technology

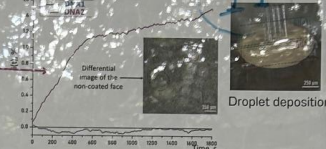
Multiplex detection
Minimally invasive
Real-time
Label free
In vivo probing



Multicore optical fiber biosensor

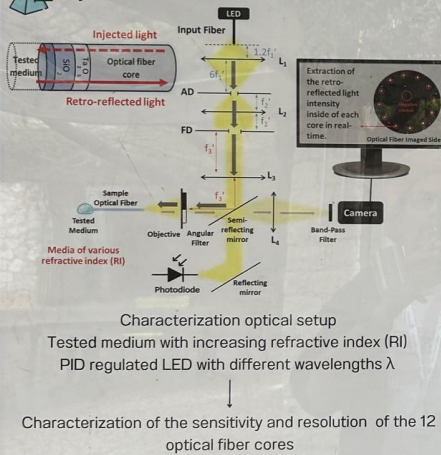


Previous results on rigid image conduits [1]

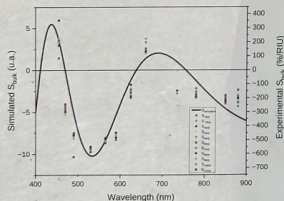


MATERIALS AND METHODS

Optical Characterization

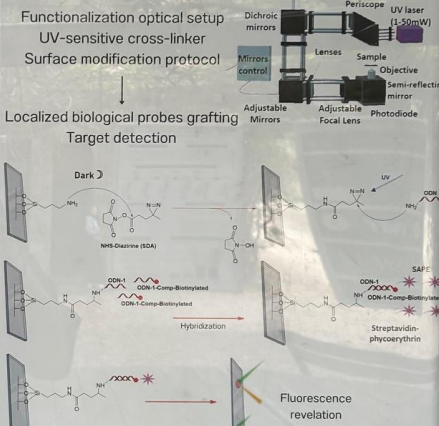


Results

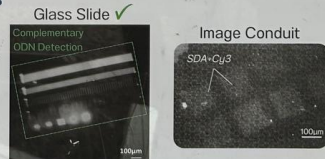


Experimental data match the numerical model

Surface Modification



Results



Validated on glass slides. Work in progress on fibers

Perspectives

- Multi-functionalization with proteins (antigens/antibodies)
- Detection of targets in media of increasing complexity
- 2 collaborations ==> 2 models

