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## Toward compact SNOM

B. Mourched, A Tsigara, P. Falgayrettes, E L Nativel, R. Kribich, B. Belier, R. Courson, P. Etienne, S Etienne-Callas, P. Gall-Borrut

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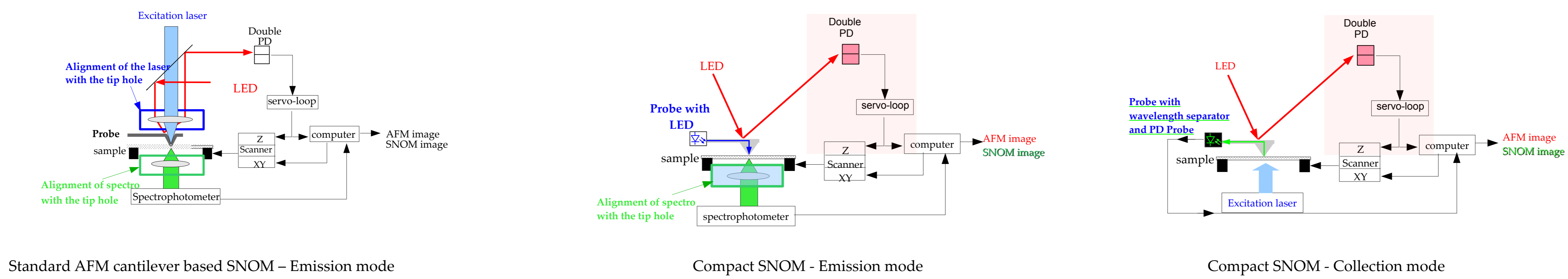
B. Mourched<sup>1</sup>, A. Tsigara<sup>1</sup>, P. Falgayrettes<sup>1</sup>, E.L. Nativel<sup>1</sup>, R.Kribich<sup>1</sup>, B. Belier<sup>3</sup>,  
R. Courson<sup>2</sup>, P. Etienne<sup>2</sup>, S. Etienne-Callas<sup>2</sup> and P. Gall-Borrut<sup>1</sup>

<sup>1</sup> IES - Université Montpellier 2 - Place E. Bataillon - 34095 Montpellier - France

<sup>2</sup> L2C - Université Montpellier 2 - Place E. Bataillon - 34095 Montpellier - France

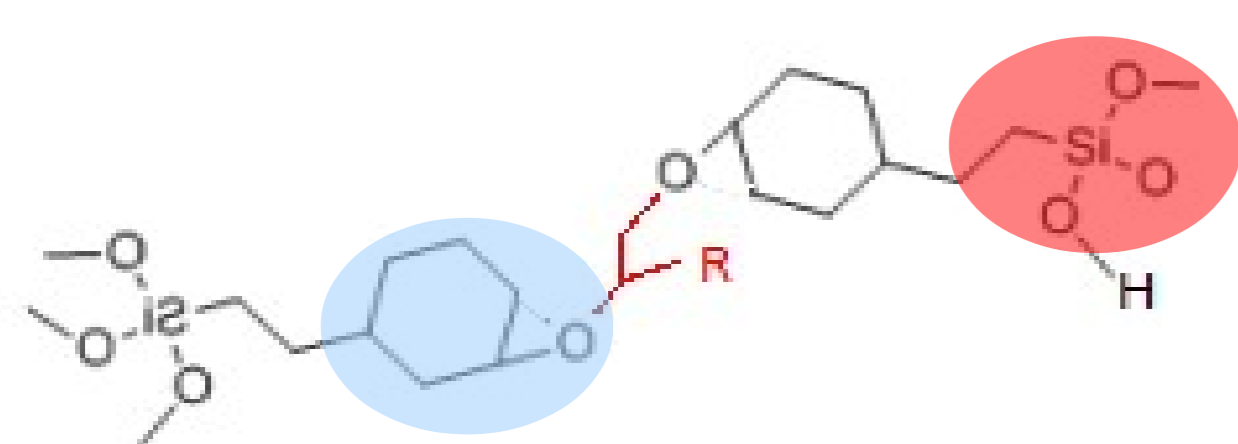
<sup>3</sup> IEF - Université Paris Sud - Rue André Ampère Bât 220 - 91404 ORSAY Cedex - France.

**The project :** Suppress most of the optical adjustments required in a standard SNOM microscope



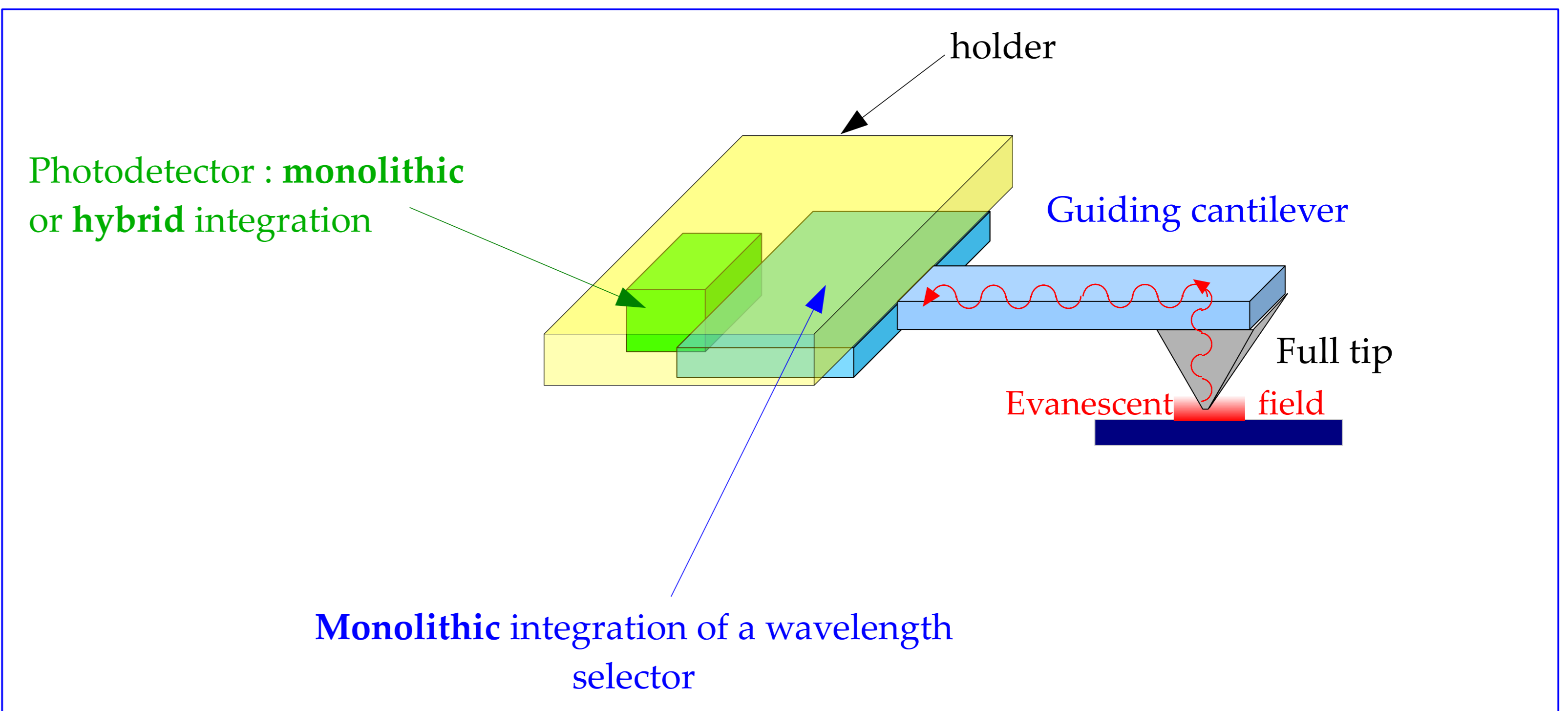
## Hybrid sol-gel material :

two interlocked mineral and organic tri-dimensional networks

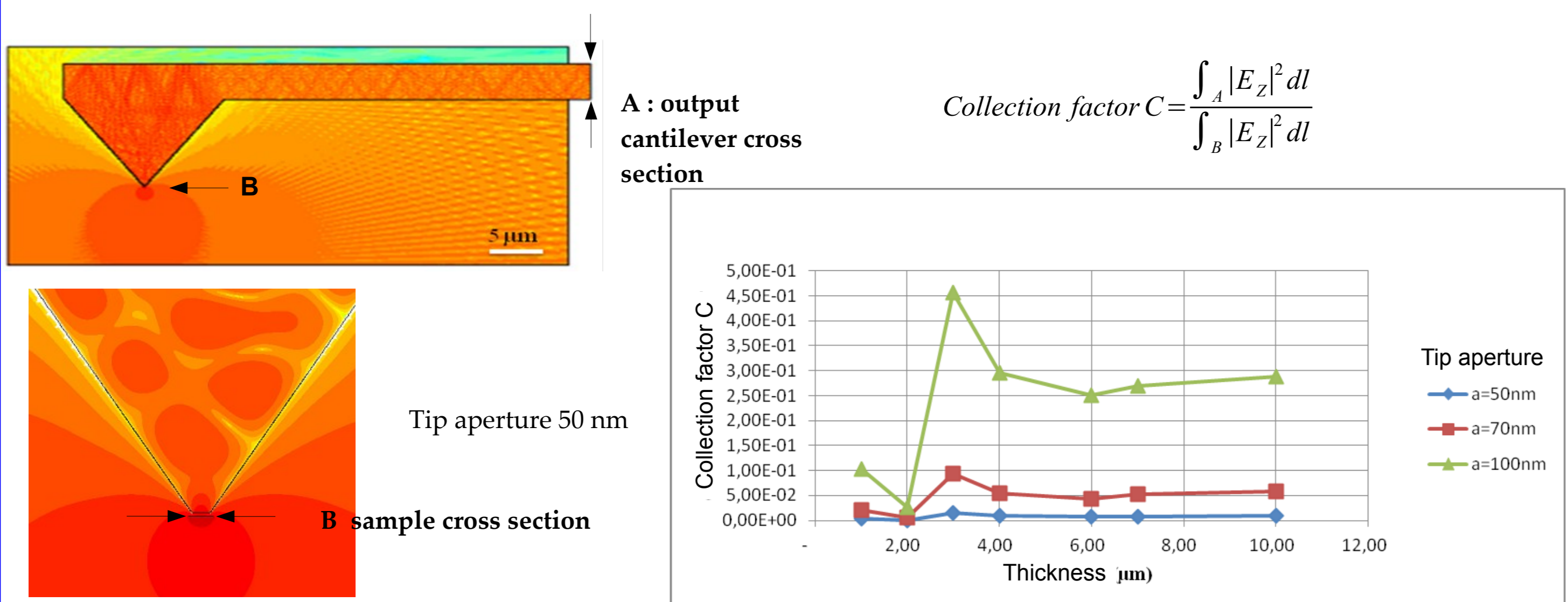


Ease and simplicity of fabrication  
Optical properties (tunable)  
Mechanical properties (tunable)

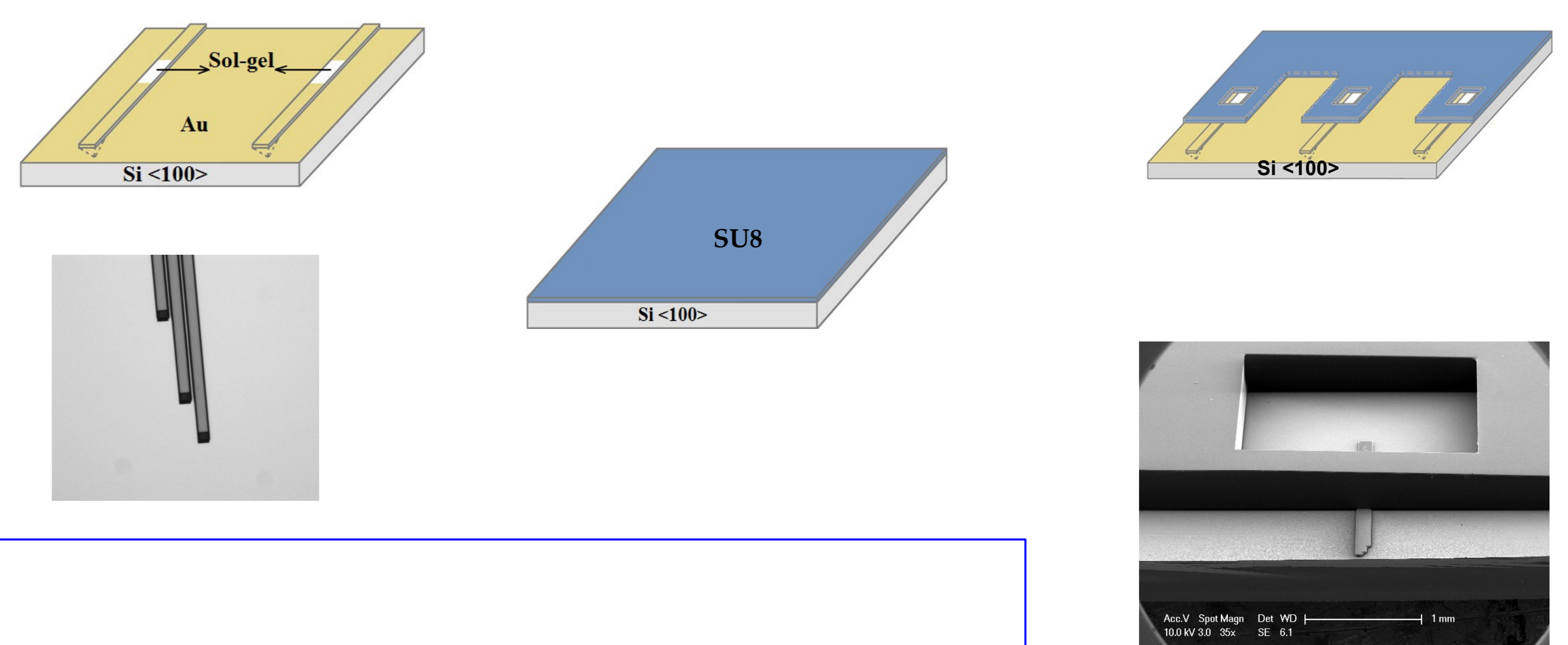
$n=1,519 \pm 0,001$       $E = 6,05 \pm 0,15$  GPa



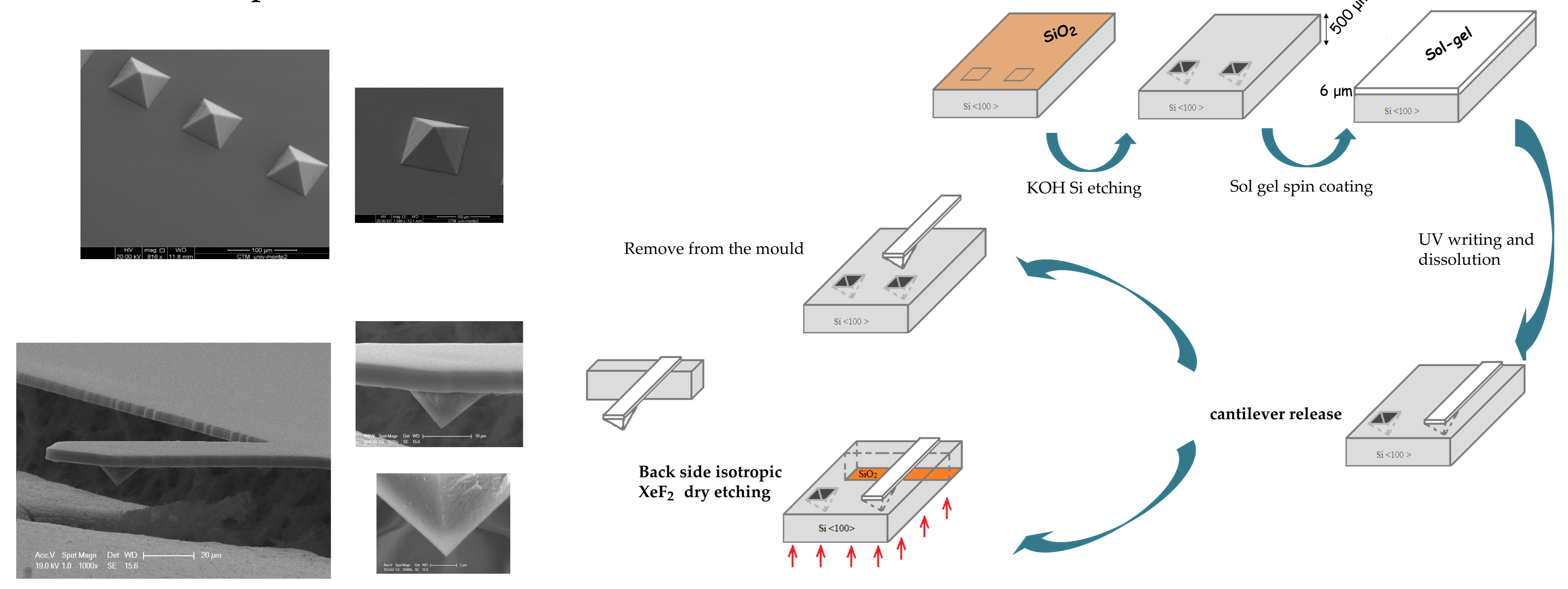
## Simulation : Optimisation of cantilever thickness



## Fabrication : Holder and Hybrid integration of the photodetector



## Fabrication : Tip and Cantilever



Associated to the detector, monolithic integration of wavelength selector will enable to get rid of the spectrometer and the related adjustment.