

Gruppo di Fotonica e Nanostrutture

Ottica e Fotonica Applicate all'Energia

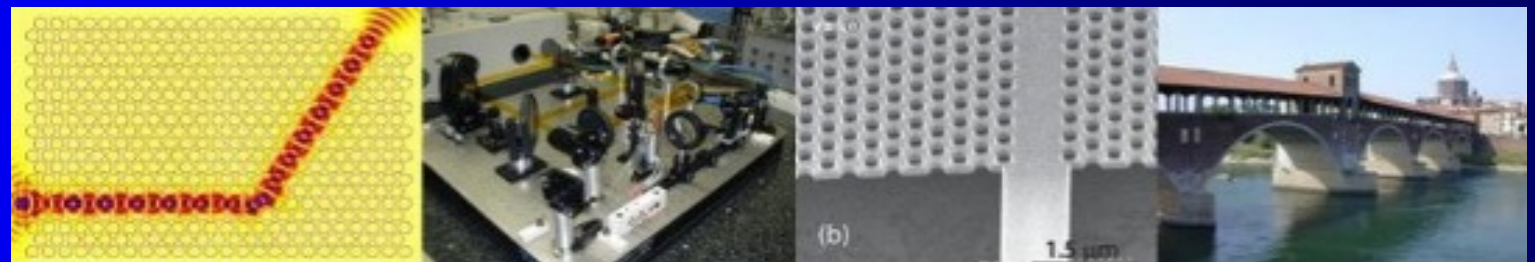
Angelo Bozzola

Fotonica e Informazione Quantistica

Davide Grassani

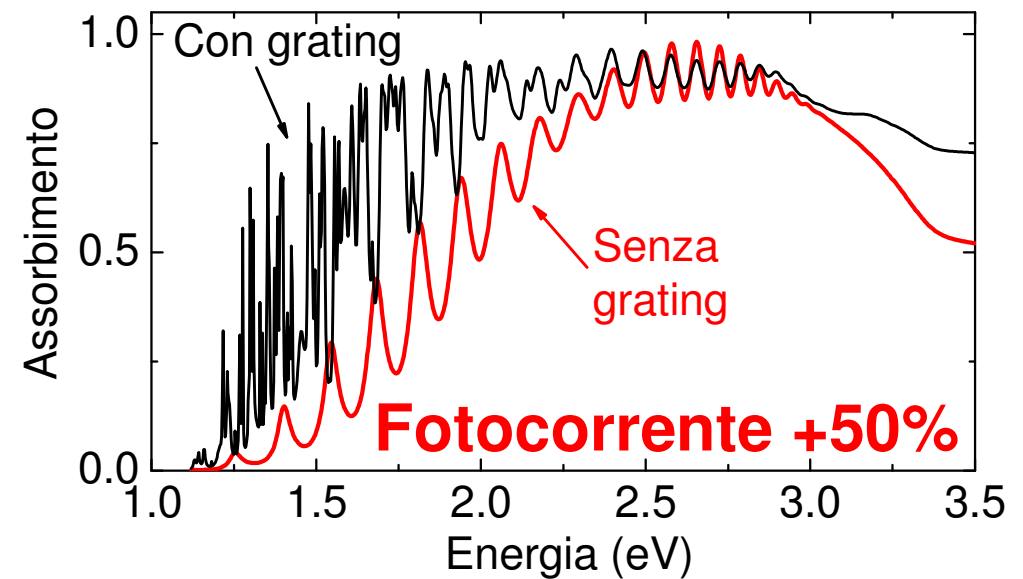
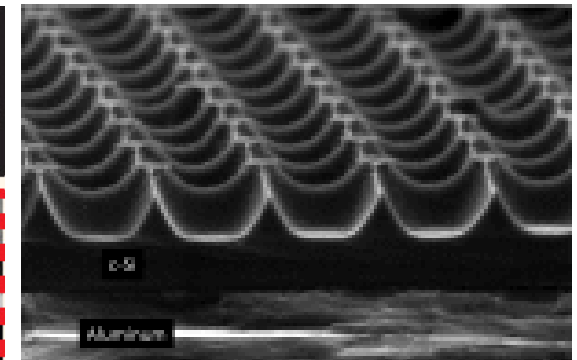
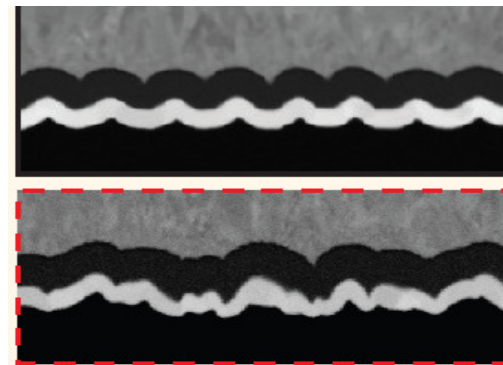
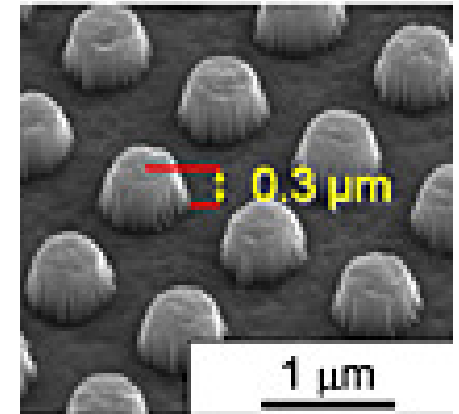
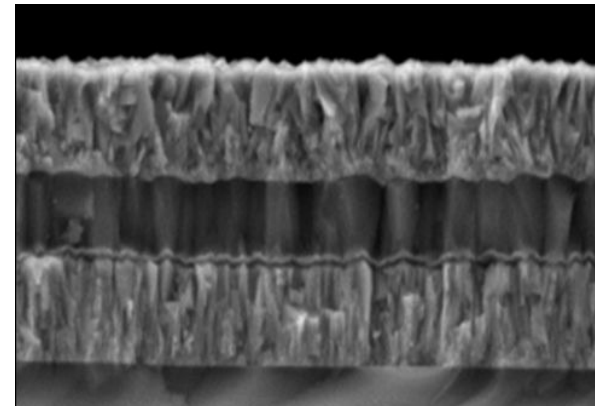
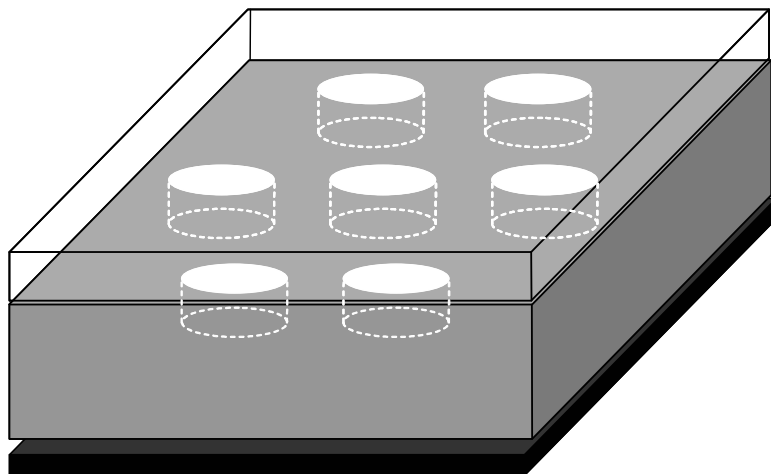
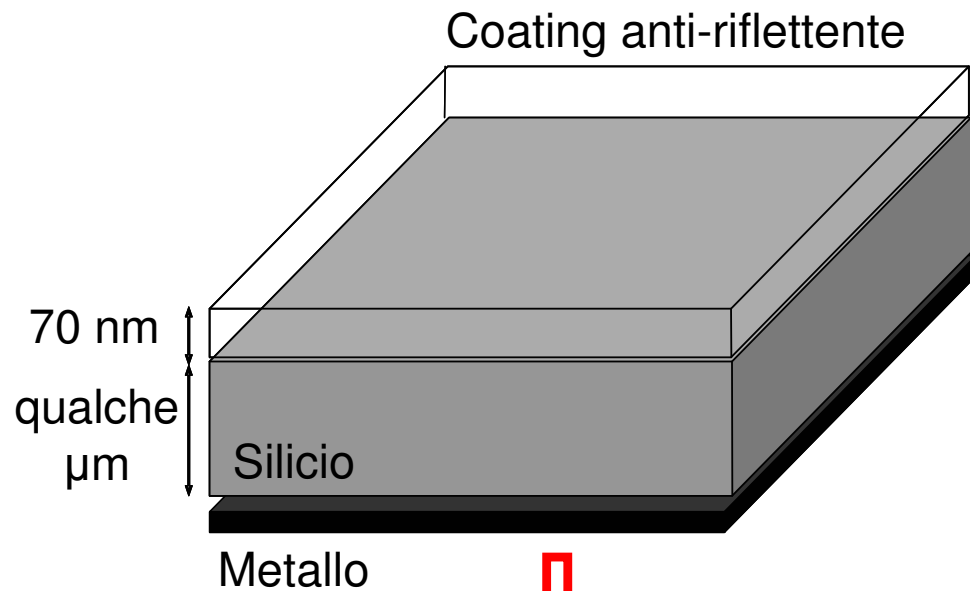
Superfici Nanostrutturate per Sensori Bio e Chimici

Francesco Floris



Light trapping in celle solari

Angelo
Bozzola

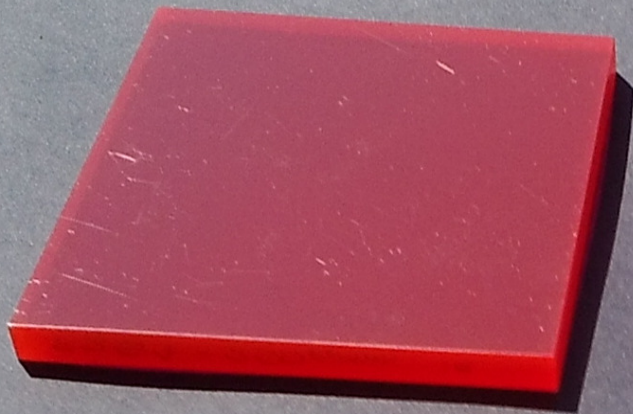


Concentratori luminescenti

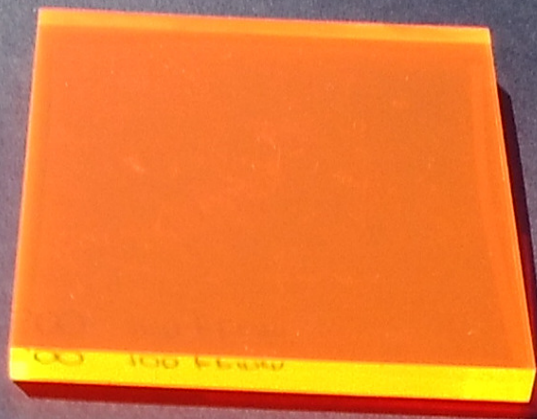
*Angelo
Bozzola*

Campioni Eni S.p.a.

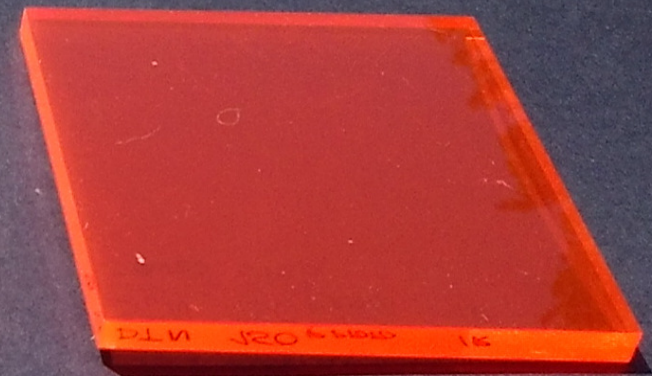
F521



F500



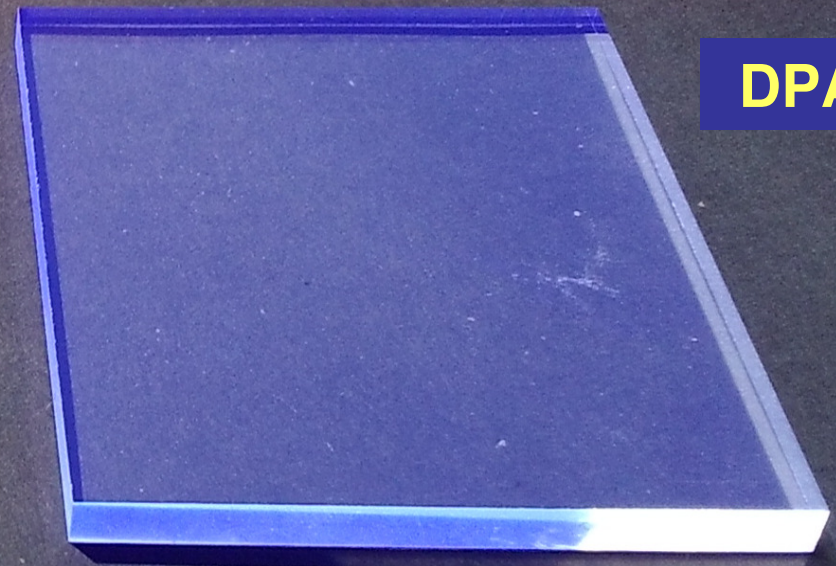
DTN



DTB



DPA



Fotovoltaico building-integrated

*Angelo
Bozzola*

Congress Center, Saia Barbarese
Topouzanov architectes, Montréal, 2003



Eni via Laurentina, Roma
Inaugurato novembre 2012



Why Quantum Information?

*Davide
Grassani*

Superposition Principle

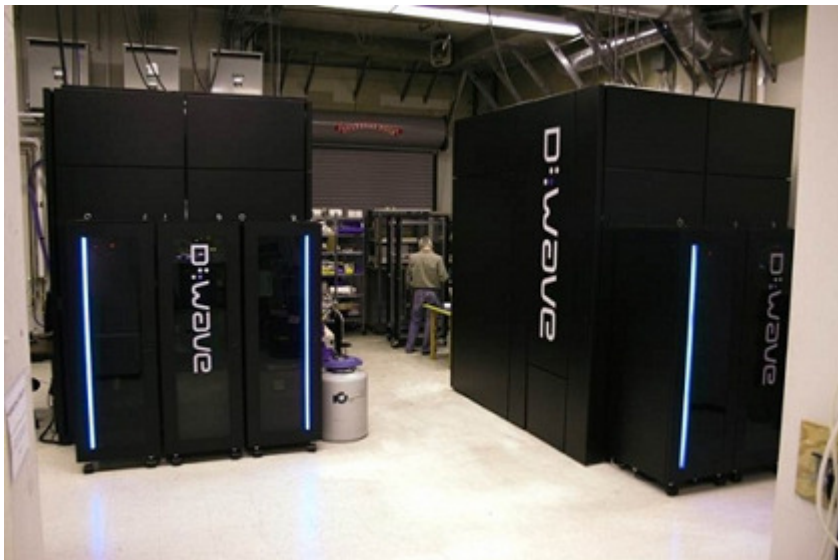
bit

0

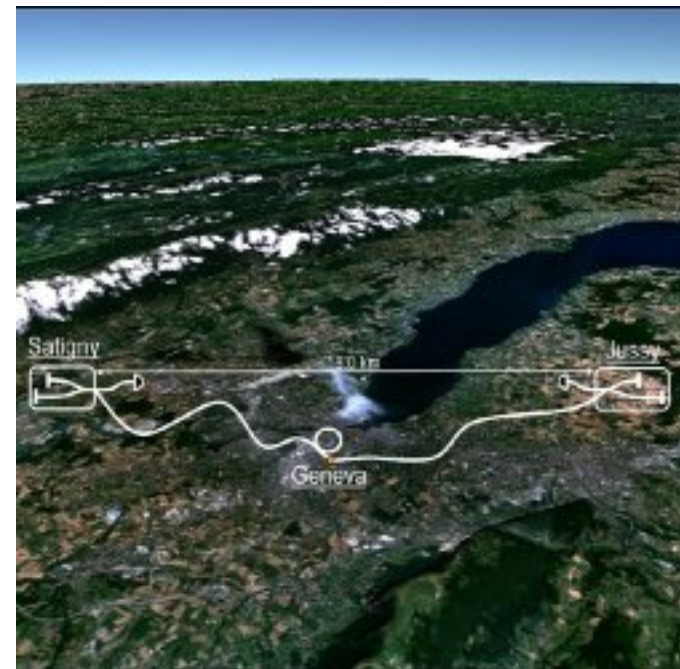
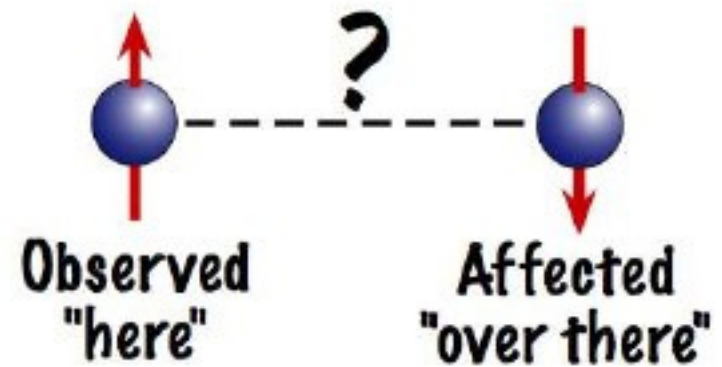
Qbit

$$\longrightarrow \alpha|0\rangle + \beta|1\rangle$$

1



Quantum Entanglement



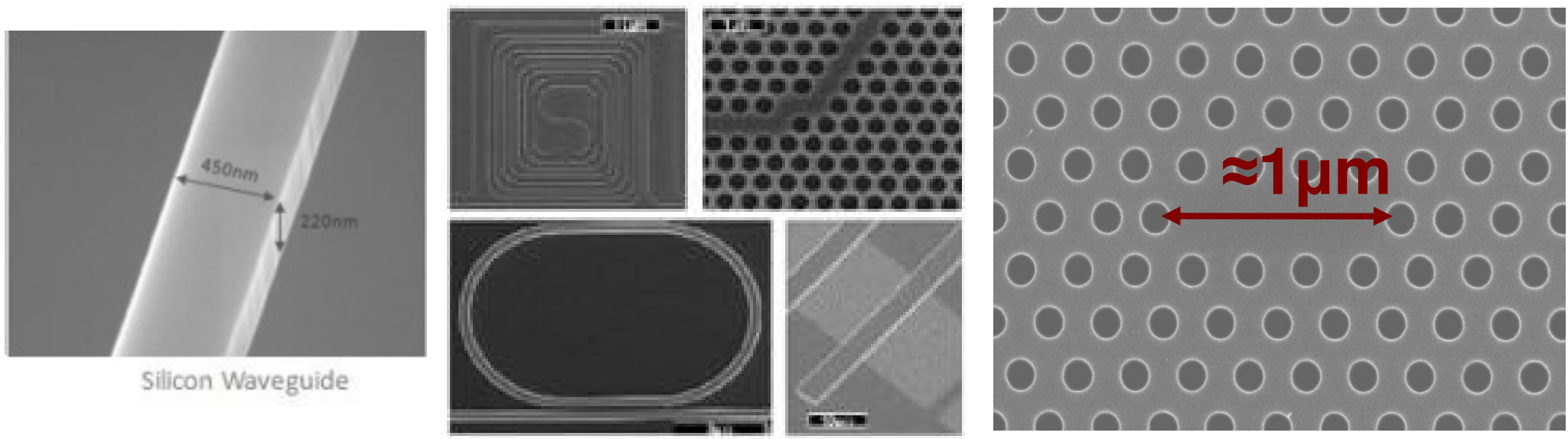
Why Photonics?

*Davide
Grassani*

Photons propagate in optical fibers over hundreds of Km (low losses)

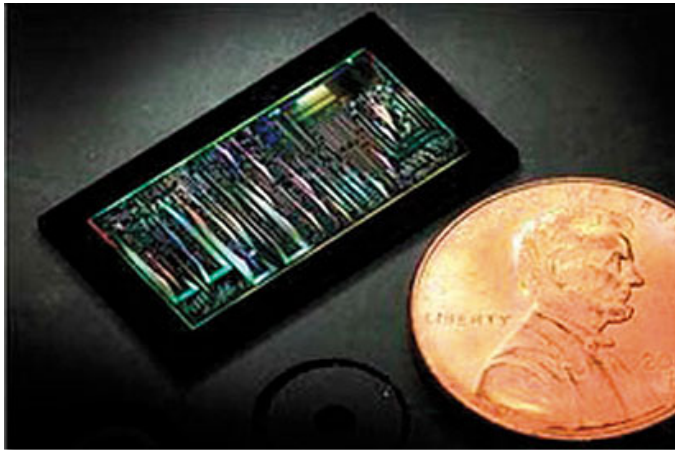
Make up circuits with photons!

Photonics can master the light, at micrometer scale!



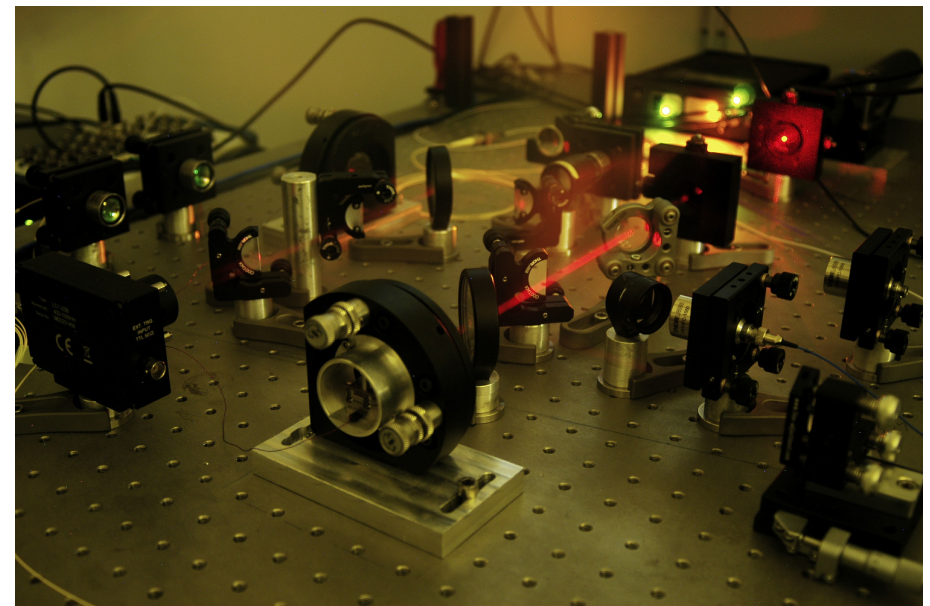
Entanglement on a chip!

*Davide
Grassani*

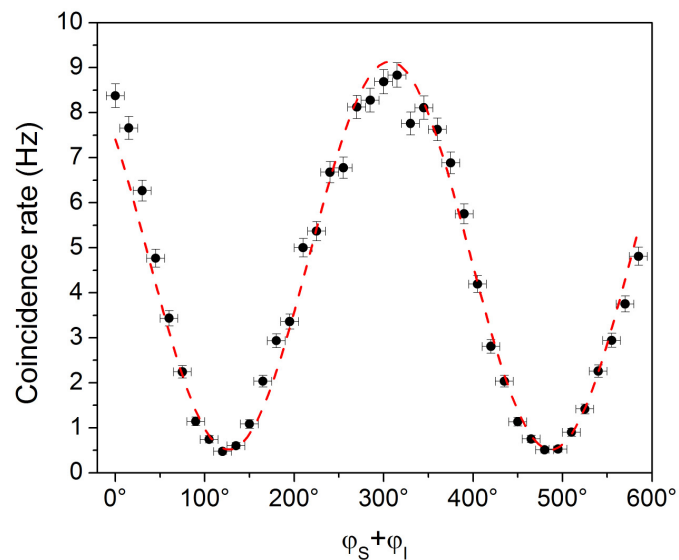


**Integrated silicon
photon source...**

Experimental set-up

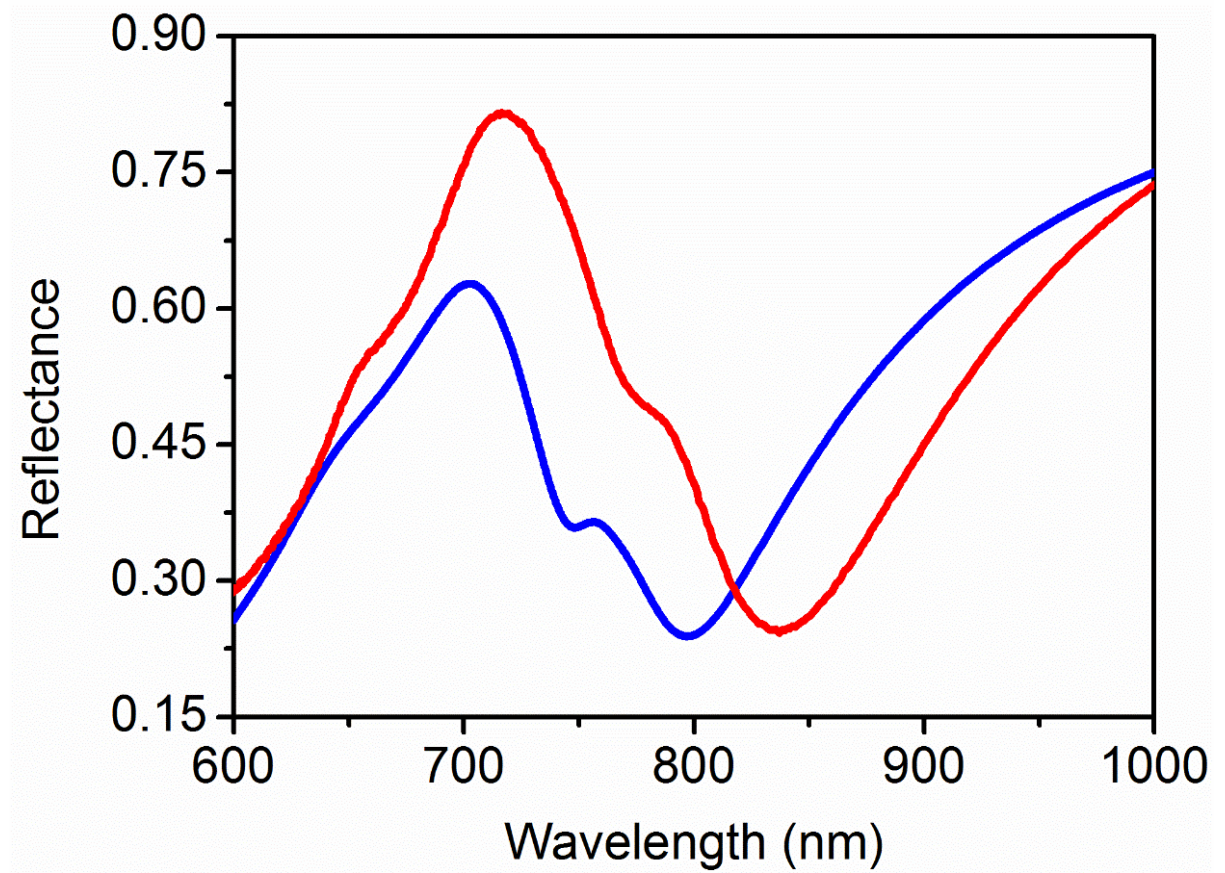
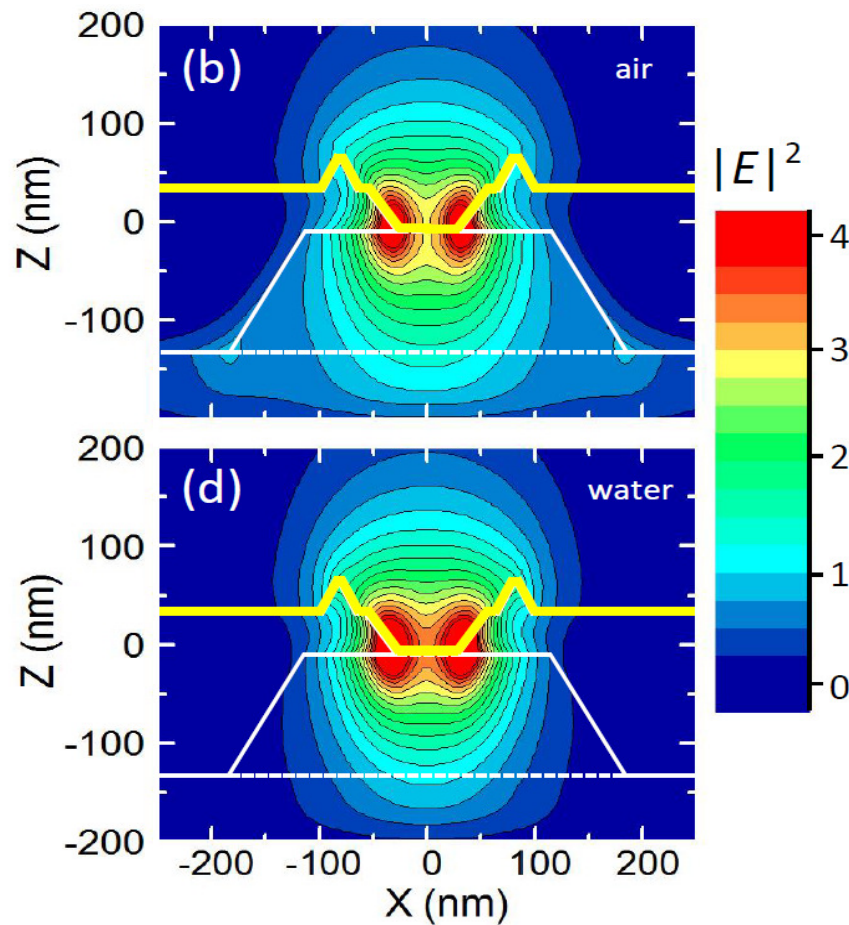
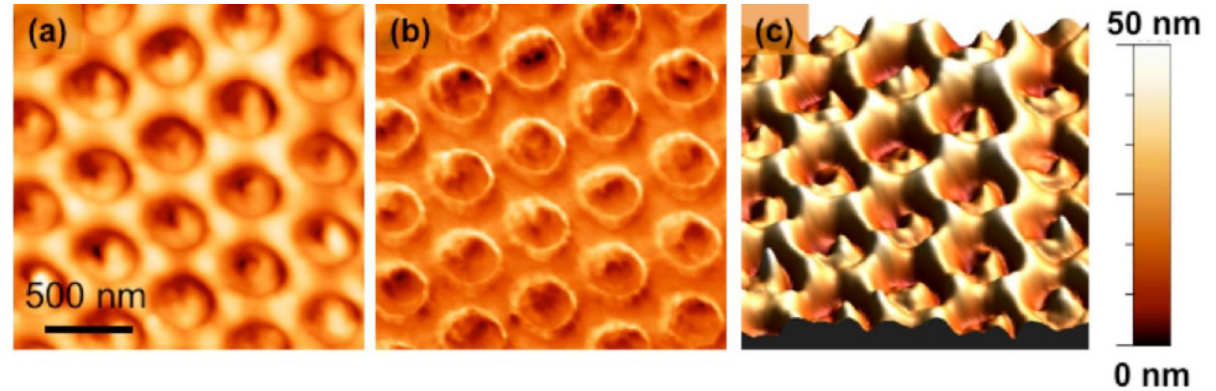
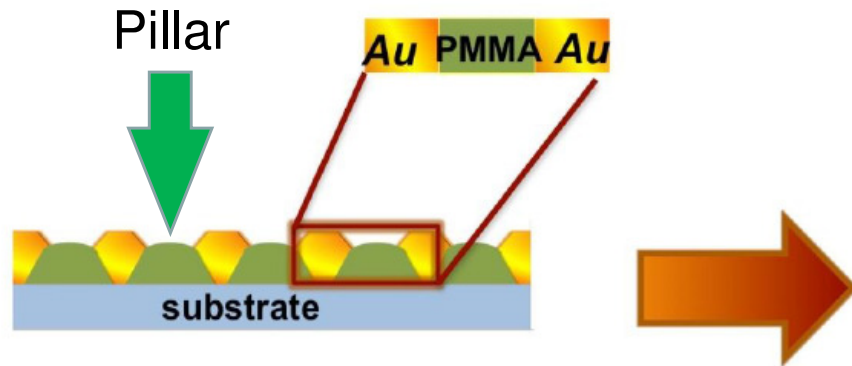


Result



Sensori Bio Plasmonici

Francesco Floris



Sensori Chimici Fotonici

Francesco Floris

