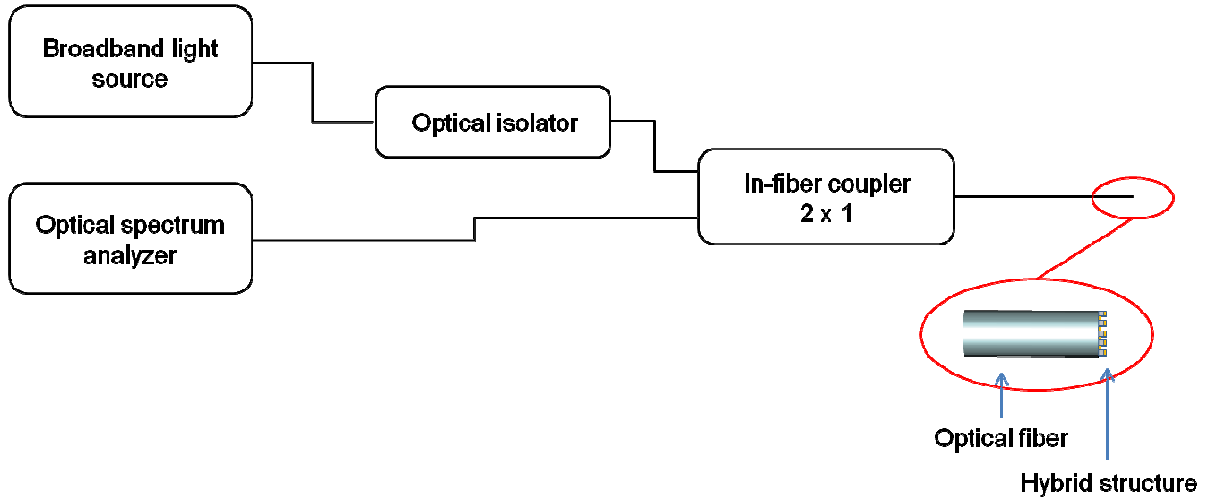


## SUPPORTING INFORMATION

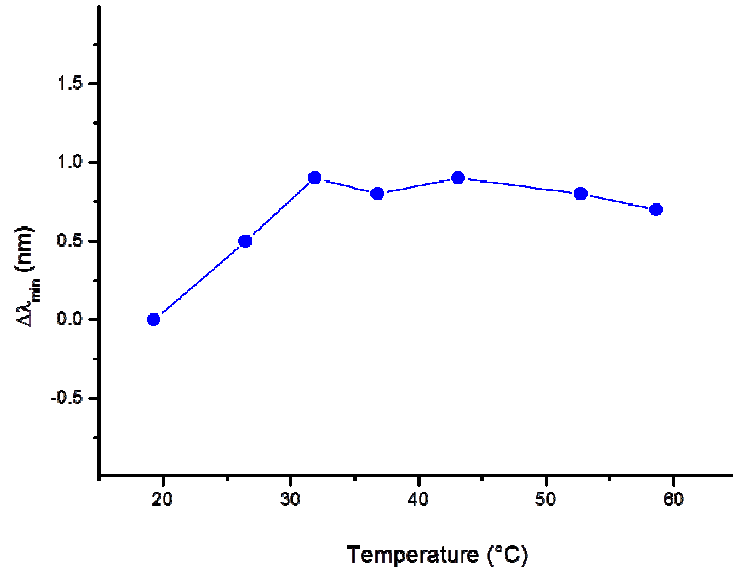
### Experimental setup for spectral characterizations.



*Figure S1: Schematic of the experimental setup used for reflectance spectra characterization.*

### Temperature cross-sensitivity of the fabricated sample.

In Fig. S2 we report the resonant wavelength variation of a sample coated with 40nm-thick gold superstrate as a function of the environment temperature. Measurements have been carried out by inserting the fiber tip device in a properly realized thermostated chamber.



*Figure S2: Resonant wavelength shift versus temperature of a sample coated with 40nm-thick gold superstrate.*

### Experimental setup for acoustic measurements.

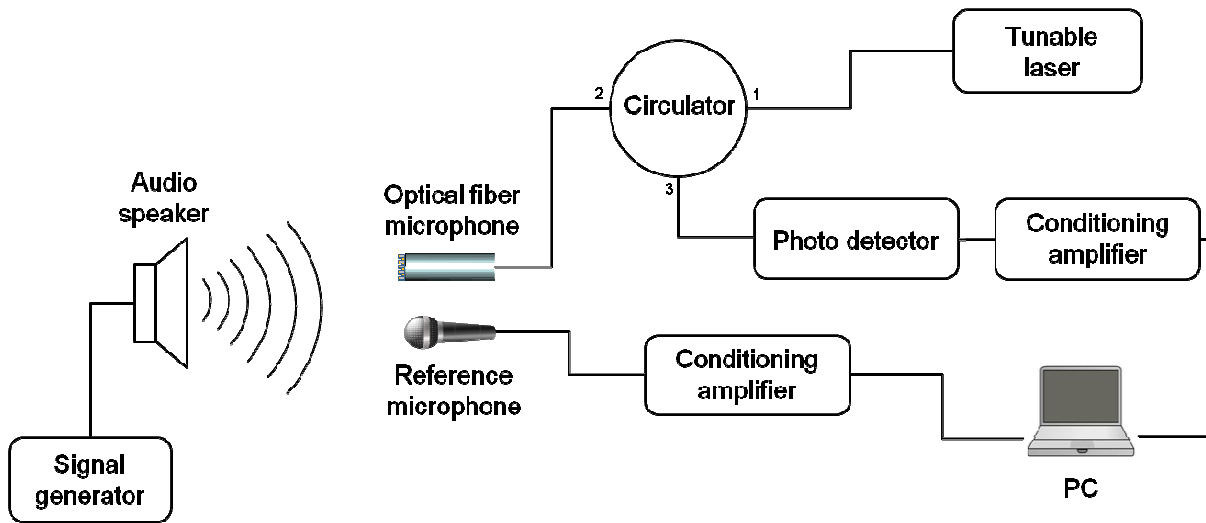


Figure S3: Schematic representation of the experimental setup used for acoustic detection measurements.