

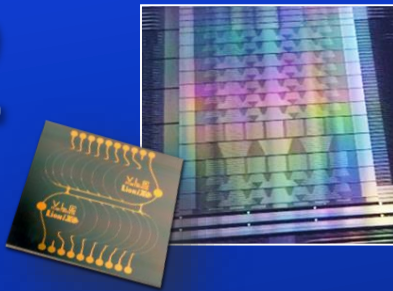
**Compact LED-based
broad-band 400-1700 nm
light source**

1



**Broad-band VIS-NIR spectrometer
photonic integrated circuit,
optical interconnects & packaging**

2



3

**Cubic inch form factor
broad-band 400-1700 nm
diffractive spectrometer**



The InSPECT project enables the realization of photonic building blocks for low-cost miniaturized **spectral tissue sensing** devices. This involves the realization of a miniature **broad-band solid-state light source** and the realization of a **miniature low-cost integrated spectrometer**, both operating in the VIS/NIR from **400 to 1700nm**.



Spectral tissue sensing, using compact photonic probes has the promise to be a valuable tool for screening and diagnosing purposes, e.g. for discriminating between healthy and tumorous tissue.

Real-time tissue-characterization feedback to the physician during an intervention can significantly improve the outcome of diagnosis and treatment.



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