



# WIDE-BAND HYPERSPECTRAL SPECTROPHOTOMETER

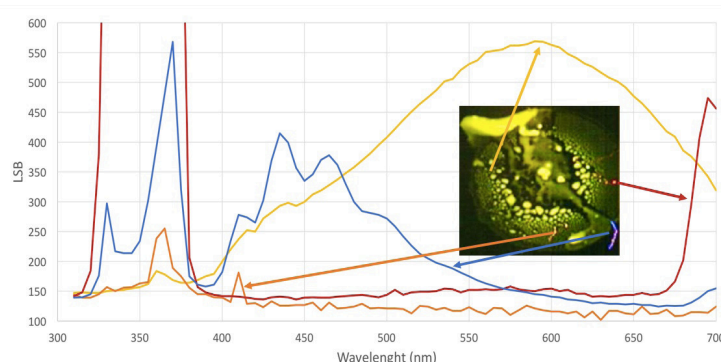
*Innovative device for spatial and spectral mapping of the emission of light from a weak source, from visible to Infrared*

## Potential applications

### Analysis of very faint sources

Mapping the emission of light from opto-electronic components consisting of multiple superimposed junctions (photodiodes, tri-junction solar cells, etc.) for the whole spectral range of emission of the component.

Acquiring and locating in the field of view, the emission spectrum of the fluorescence of organic fluorescent materials (mainly macromolecules contained in glues, resins and paint).



## Summary of the invention

Enables the mapping of light emitted by a weak source in two dimensions for a spectral continuum from 400nm to 1700nm. We thus obtain with this device a matrix of 2D intensities (X and Y) for each wavelength of the spectral domain covered.

## Technological advantages

**Wide spectral band catoptric solution**  
**No chromatism (distortion or dispersion) on the spectral band of interest**

**Spectral dispersion with prism**  
**Adapted for the spectral resolution of applications (5nm at least in the visible range)**

**No overlapping of orders**  
**Good transmission yield for a wide spectral band**  
**Acquisition of spectra on matrix detector arrays made of silicon for the visible range and InGaAs for the infrared range**

**X and Y resolution of:**

- **25µm for analysing photodiodes (450-1700nm)**
- **50µm for fluorescence (290-650nm)**
- **200µm for solar cells (650-1700nm)**

## Commercial advantages

**A unique solution for analysing weak sources over a large spectrum**

**A simple and robust solution**

**Simple and conventional elements.**  
**Mechanically robust and portable.**

*Patented invention available under licence*