

## Semiconductor Applications

Discover Our Spectroscopic Solutions

Amorphous and nanocrystalline semiconductors present a **wide range of opto-electronic properties** that make them scientifically and technologically **interesting for electronic device applications** such as thin film transistors, light emitting diodes and solar cells.

HORIBA Scientific offers techniques for the investigation of **electronic transport**, as well as **optical and structural properties**. In addition, improve your **process control** via a fast and easy feedback.

**Just for the ICANS 28 attendees,  
come to our lab with your own samples  
and test HORIBA instruments for free!**

- Morphology and phase analysis (amorphous VS crystalline)
- Structural changes (strain, temperature, etc...) e.g. control of epitaxial growth
- Defect localization

### Raman Spectroscopy



### Ellipsometry



- Thickness and interface measurement from sub-monolayer to several  $\mu\text{m}$
- Optical properties of thin films
- Absorption and bandgap

- Trace elements and fast doping profile analysis
- Direct semiquantitative analysis with no need for calibration



### Plasma Profiling Time of Flight Mass Spectrometry



### Glow Discharge Optical Emission Spectroscopy

- Elemental composition (from H to U) for a fast process optimization
- Fast elemental depth profiling, with a resolution at the nm

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