

Klar Scientific's Test and Measurement Service

Photoluminescence & Raman scanning from 266 nm through 1700 nm

Specializing in UV through IR spectroscopic mapping and analysis

Materials

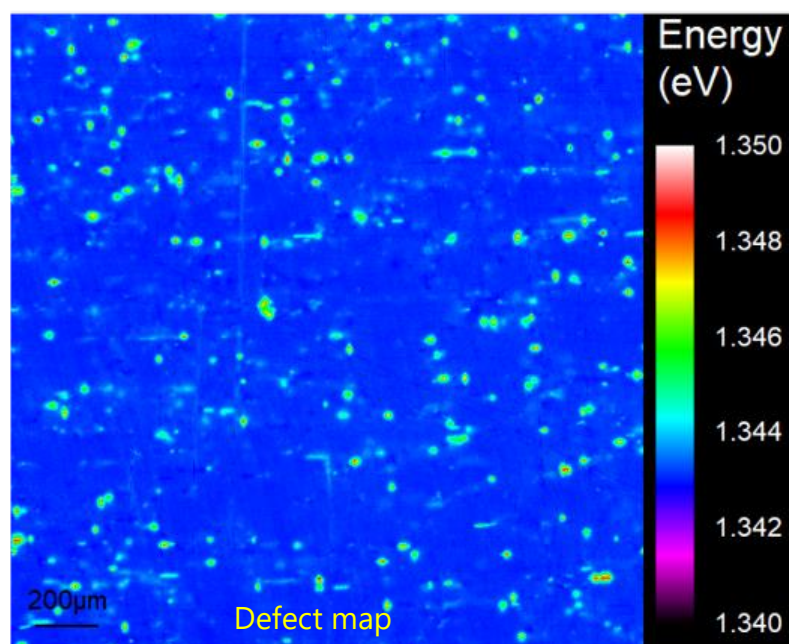
- Semiconductors
- Heterostructures
- Micro-LED arrays
- High-power circuits
- Perovskites
- LEDs and laser diodes

Features

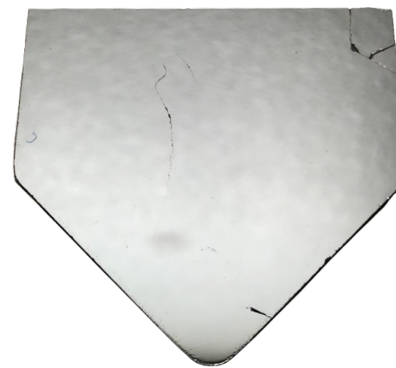
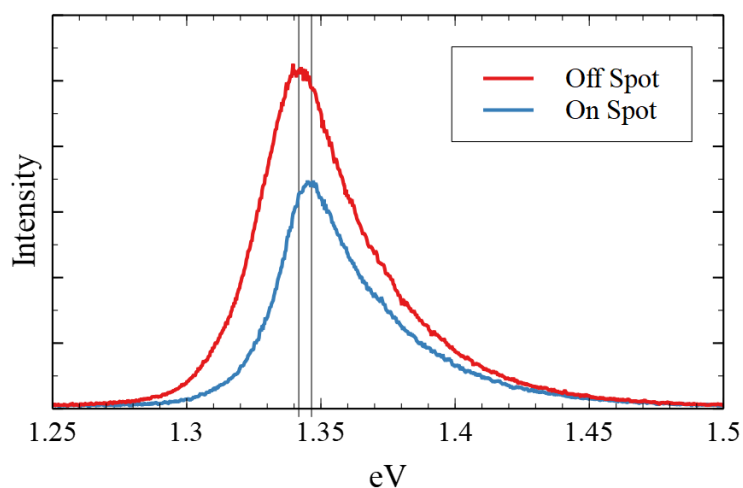
- Field sizes to 100 mm x 100 mm
- Resolution < 0.6 μm
- Variation sensitivity < 5 meV/ μm
- Millions of samples
- Scan-rescan mode (PL/Raman)
- Interchangeable wavelengths

Quantitative results

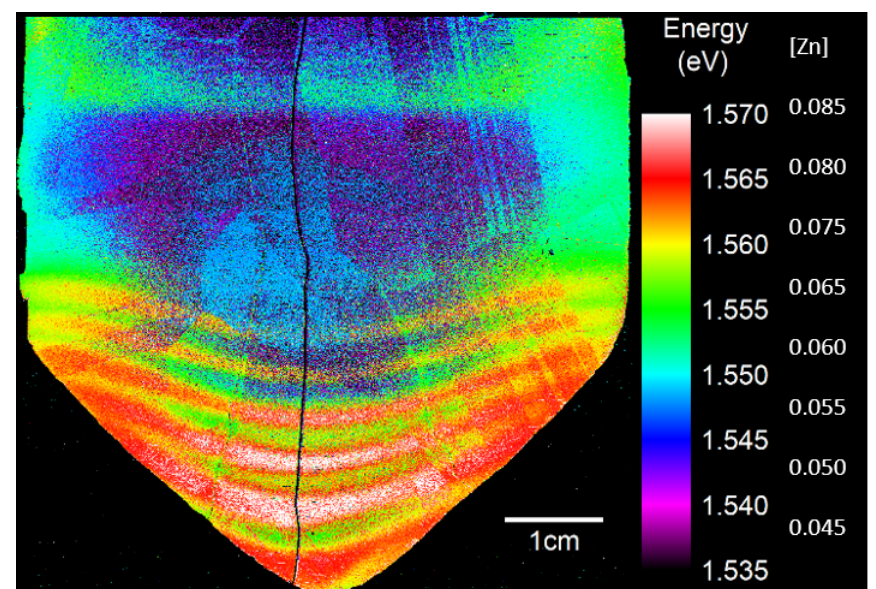
- Bandgap uniformity
- Defects & defect density
- Interlayer interactions
- Elemental composition
- Process variations
- Device features



Mapping is sensitive to small changes in peak properties, often revealing defects, such as these threading dislocations in an InP wafer.



PL peak energy for a CdZnTe ingot is proportional to Zn content. An energy map reveals poor mixing during a Bridgman process.



- **Fast turnaround**
- **Detailed maps and summary**
- **Data files upon request**