



# Scintillation Detectors for Electron Microscopy and High Resolution Imaging

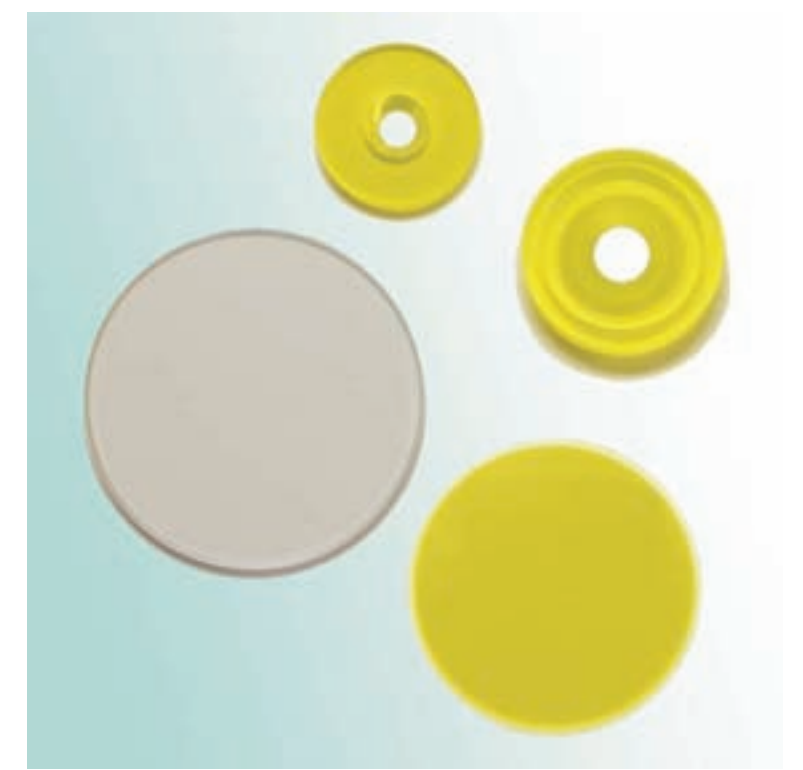
Our main field of competence is the production and development of optical elements for solid state lasers and scintillation detectors. Our original production technology encompasses crystal growth, grinding and polishing, and coating. Based on the unique materials we develop, design and produce many types of detectors and units including electronics and mechanical parts.

## Scintillation Materials

**YAG:Ce** Yttrium aluminum garnet activated by cerium is a fast scintillator with excellent mechanical and chemical resistance. YAG:Ce scintillation detectors are the preferred choice for electron microscopy, beta and X-ray counting, as well as for electron and X-ray imaging screens.

**YAP:Ce** Yttrium aluminum perovskite activated by cerium is a fast, mechanically and chemically resistant scintillation material. Its mechanical properties enable precise machining. YAP:Ce detectors are used for gamma and X-ray counting, electron microscopy and electron and X-ray imaging screens.

**CRY 018** CRY-018 is a new mixed rare-earth silicate single crystal scintillation material featuring medium density, high light yield and short decay time. Scintillation emission wavelength is about 425 nm, the preferred wavelength of use in PMT readout. CRY-018 scintillation detectors are intended and preferred for use in electron microscopy, beta and X-ray counting, as well as for electron and X-ray imaging screens.



## Detectors For Electron Microscopy

### Crytur's Production Line



#### Standard detectors

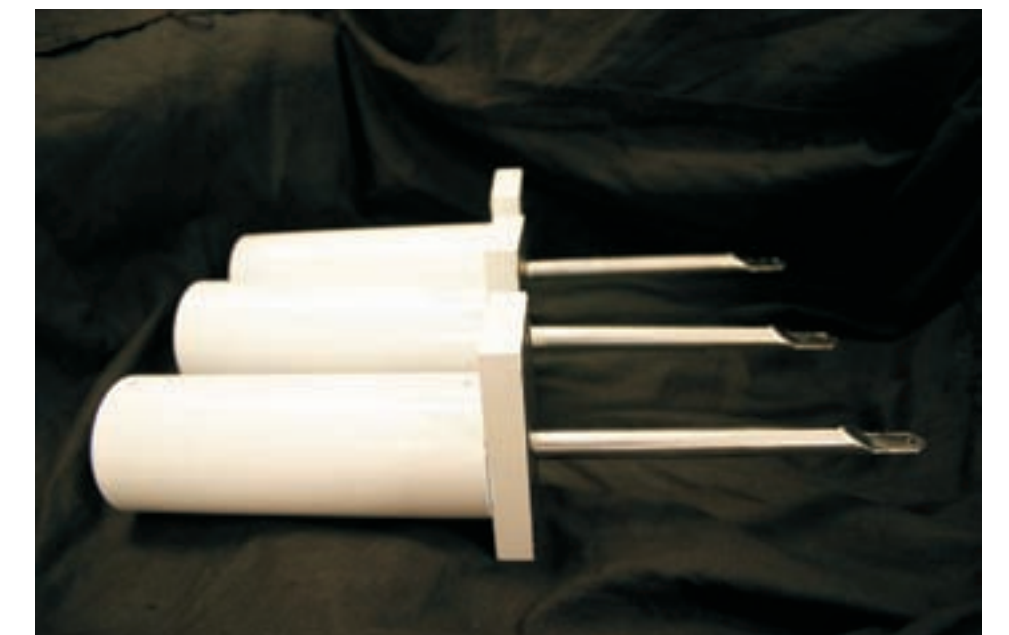
- *SE detectors*
- *BSE detectors*
- *ADF detectors*
- *CCD detectors*

#### Special detectors

- *In-lens detectors*
- *Segmented detectors*
- *Detection arrays*
- *CL detectors*

#### Custom designed detectors

- *Developed in cooperation with the customer*



## High spatial resolution Imaging Systems

### CCD based digital imaging systems

- *for X-ray and UV detection*
- *for TEM*

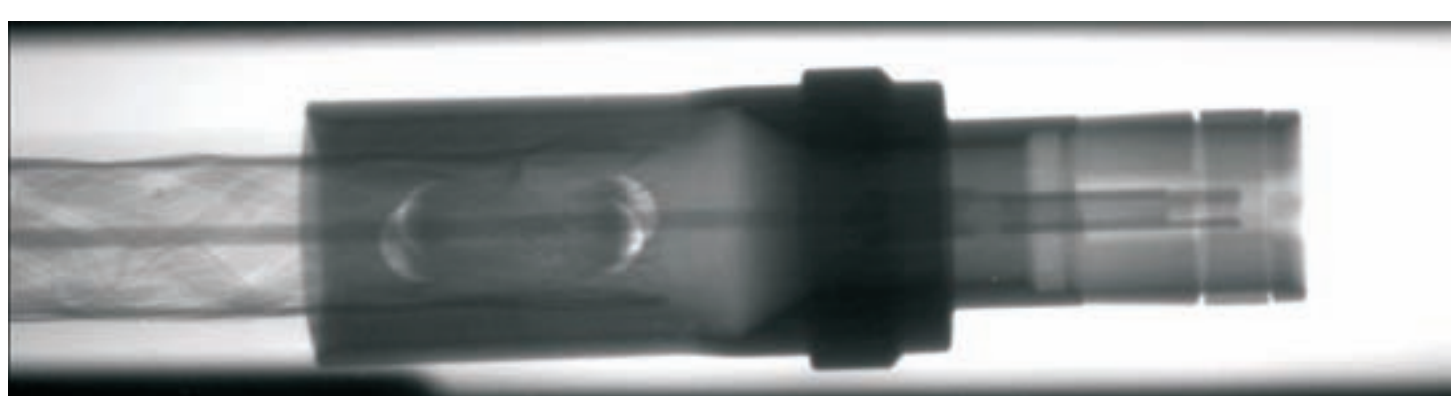
#### Consist of

- *CCD*
- *fibre optics*
- *scintillator*

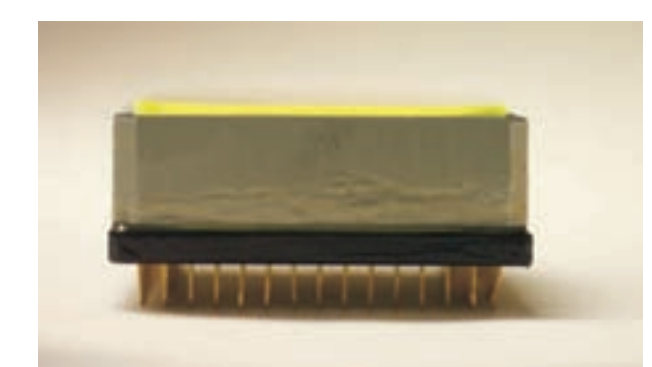
*YAG:Ce, LuAG:Ce,  
CRY 018, P43, P47*



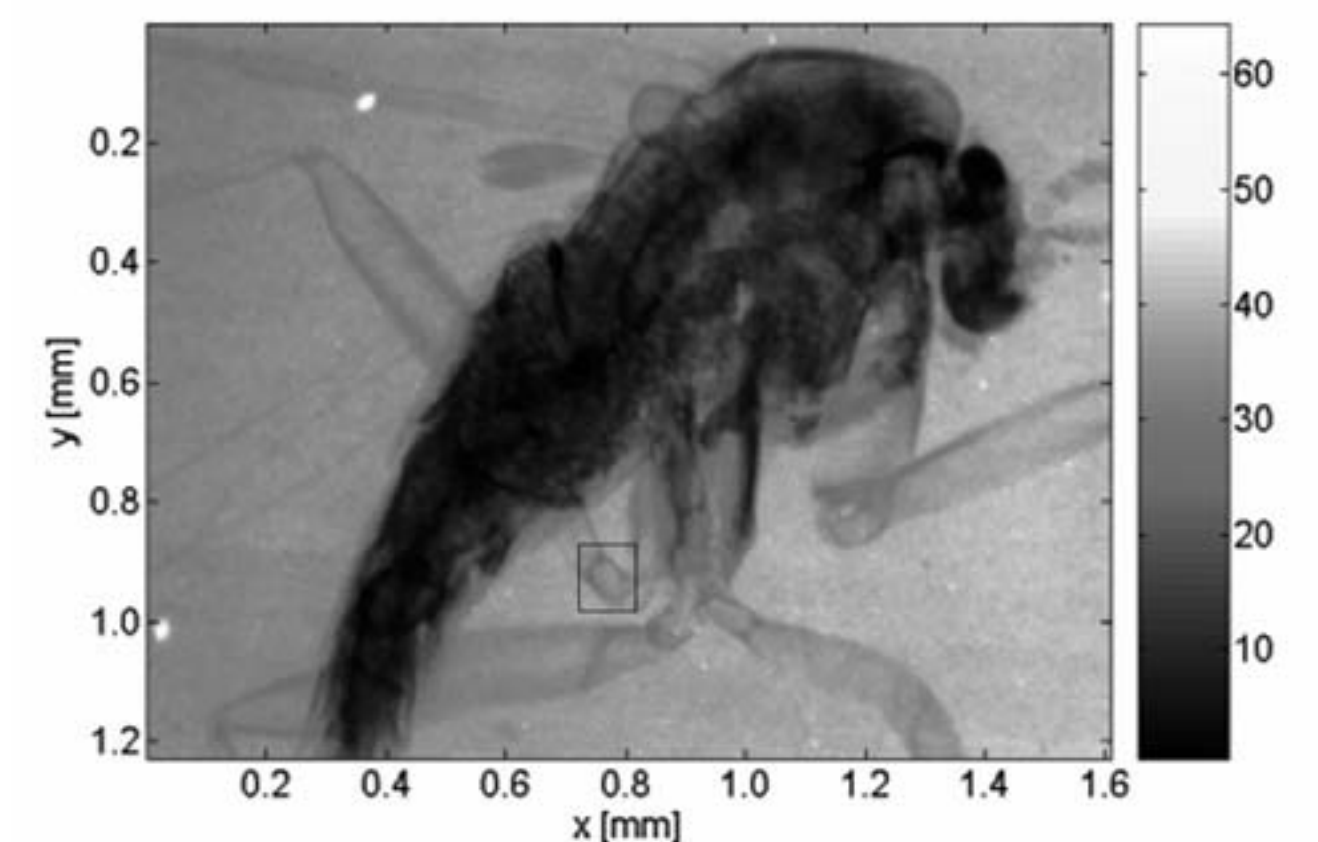
High-resolution X-ray imaging digital camera



X-ray radiography of a connector on cable



Imaging detector for TEM



X-ray micro-radiography of a *Drosophila* fly

