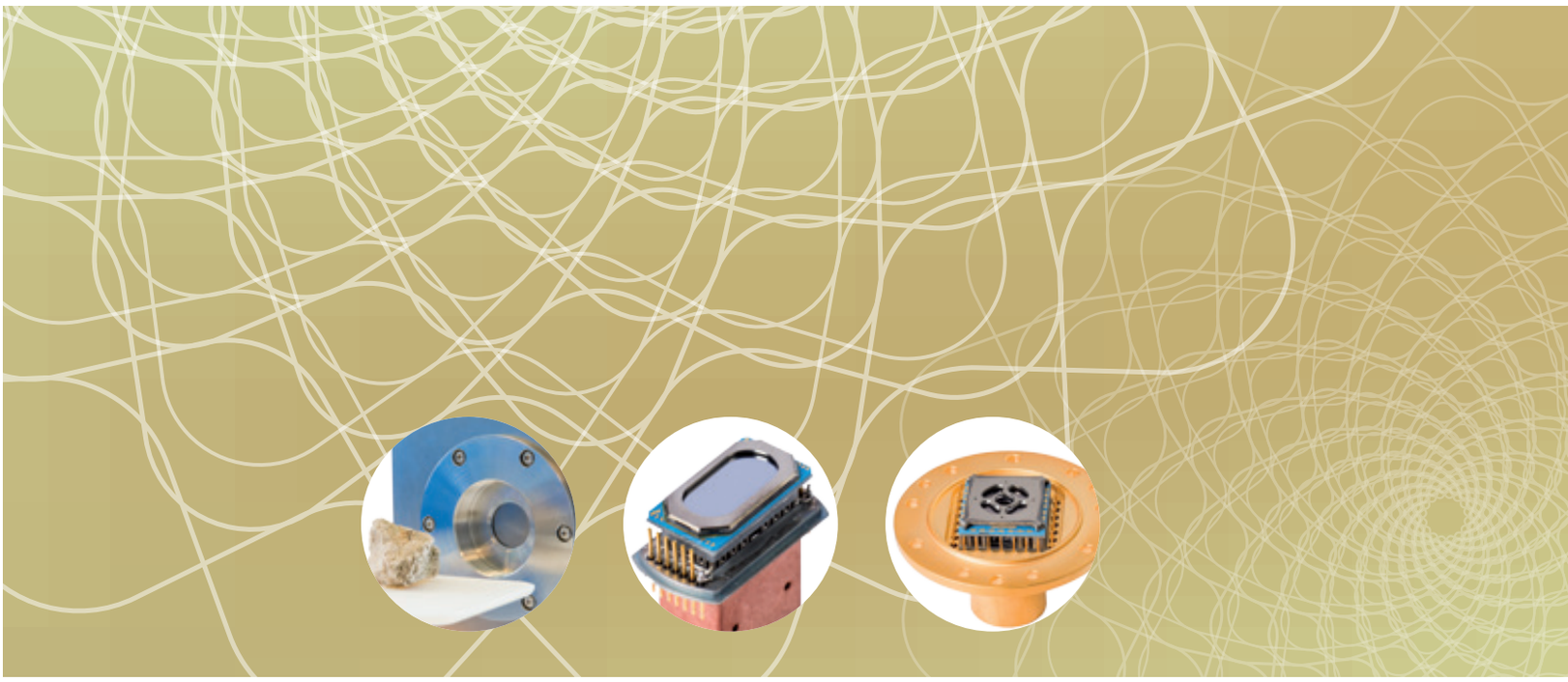
ADVANCED SILICON DETECTORS
FOR X-RAY SPECTROSCOPY & IMAGING



PNDetector

ABOUT

PNDetector was founded in 2007 as a sister company to PNSensor, with an emphasis on producing innovative and efficient radiation detectors for microanalysis, quality assurance and materials science. Our focus is on developing optimized sensors suited to the individual needs of our customers.

We are fabricating in our own cleanroom facilities at the Siemens technology campus in Munich, Germany. The cleanroom (600 m²) is a sophisticated facility dedicated to the high quality fabrication of modern radiation detectors. The cleanroom design is optimized to permit a continuous and efficient production flow starting from the raw material, 6-8 inch high purity silicon wafers, to the finalized product.

The emphasis in production and development is on Silicon Drift Detectors (SDDs) and Charged Coupled Devices (pnCCDs).

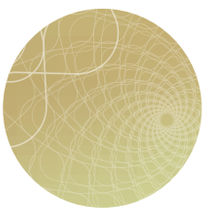
PNDetector distributes its products worldwide to OEM customers. We offer serial production as well as individual solutions - both prepared with accuracy and carefulness. Ideas, new developments, production and sales all fulfill PNDetector's sophisticated demand on premium quality.

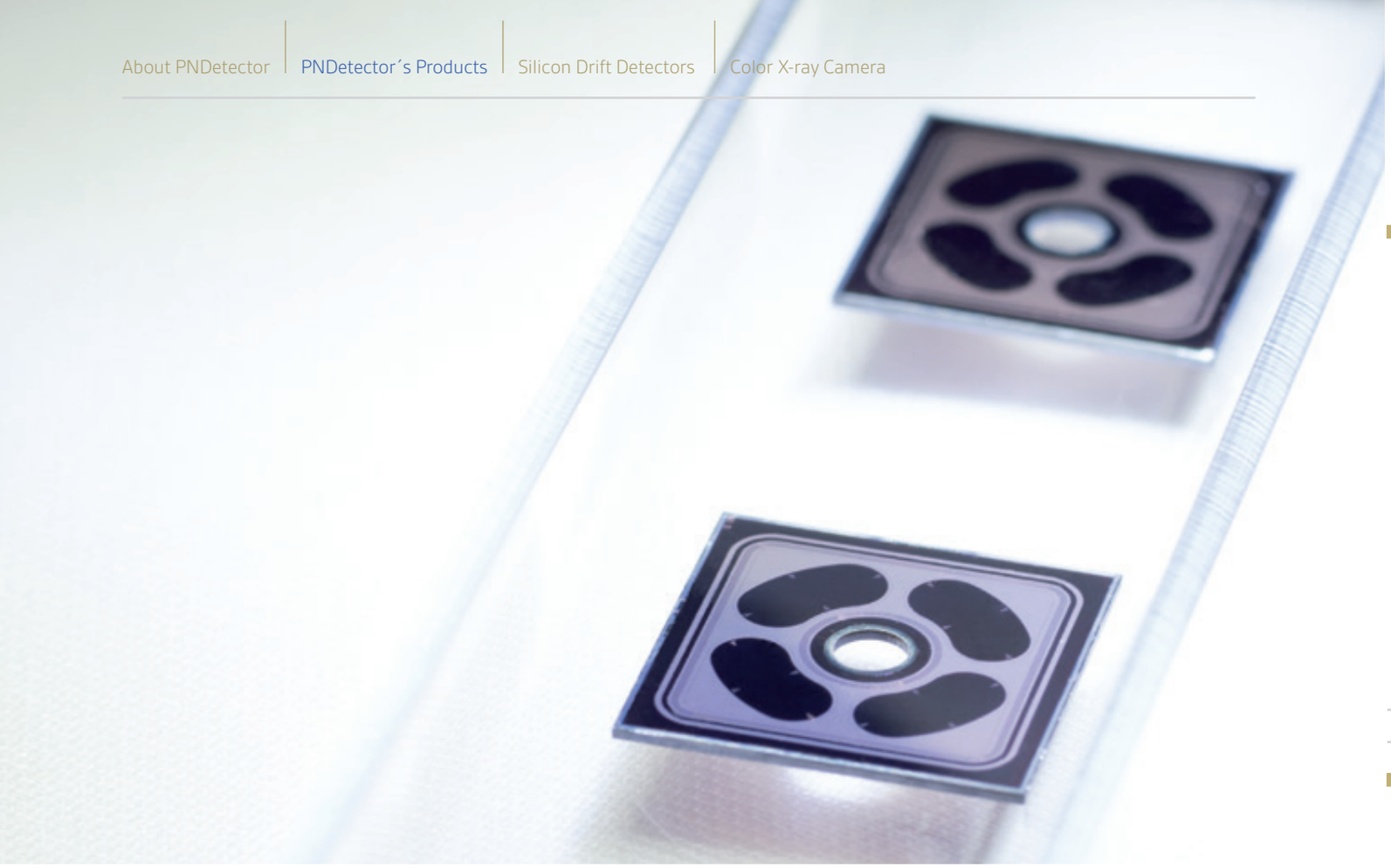
PNDetector's SDDs are at the forefront of radiation detector technology, as they combine both excellent energy resolution and short processing times. Besides common, single chip configurations, we build monolithic multi-element SDDs and large area SDDs, including unique geometries with maximum solid angle. The SDDs are used in a wide variety of instruments, such as the Scanning Electron Microscope (SEM), Transmission Electron Microscopy (TEM) and X-ray Fluorescence Devices (XRF and TXRF).

Recently, PNDetector introduced a compact pnCCD camera system for high speed X-ray spectral imaging for XRF or ultra-fast direct electron detection in TEMs.

The continuous improvement of the performance of our detectors and the development of further new and advanced sensors is an ongoing effort of our company.







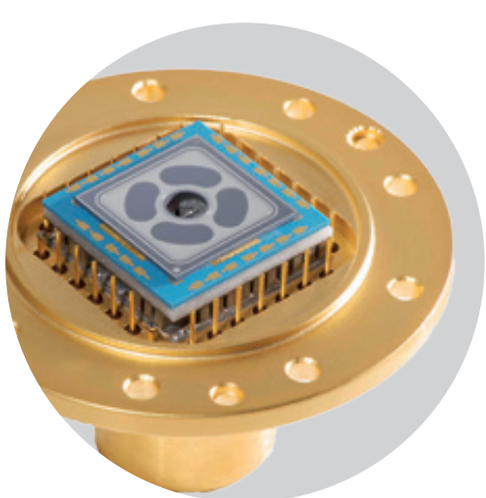
PRODUCTS

Advanced Products for X-ray Spectroscopy and Imaging

For more than a decade, Silicon Drift Detectors **(SDD)** and Charged Coupled Devices **(CCD)** developed by PNSensor and PNDetector have been at the forefront of X-Ray spectroscopy. Our key technology is the ultra-pure processing of the sensor chips with a chip-integrated Field Effect Transistor (FET), leading to detectors with extremely low input capacitance and small leakage currents. Our SDDs and CCDs show best spectroscopic performance at fast readout times.

Our business comprises the development, design, manufacturing, packaging, system integration and testing of the radiation detectors, all performed with our own staff in first class cleanroom facilities.

In this brochure, we concentrate on **Multi-Element** and **Large Area SDDs** as well as the pnCCD based **Color X-ray Camera** for scientific investigations in the fields of art and archeology, geology and material analysis in laboratories and synchrotron facilities. These detectors are unique and you can only find them at PNDetector.



Large Area and Multi-Element Silicon Drift Detectors

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optimizing high throughput measurements

- active area up to 600 mm²
- multichannel detectors for optimum collection efficiency
- ultra-high count rates up to 6 Mcps

Color X-ray Camera

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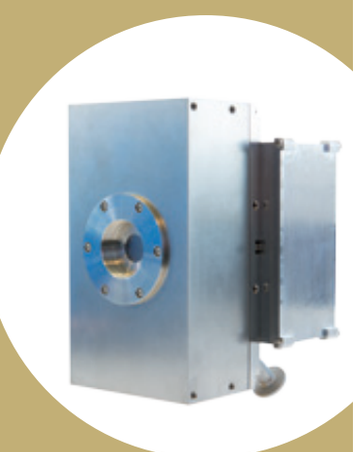
pioneering full field spectroscopic imaging

- pnCCD based
- simultaneous time, energy and position-resolved measurements
- excellent elemental information between 200 eV and 30 KeV
- unmatched radiation hardness
- ultra-fast readout of 1 000 full frames / second



For the complete document please register at http://www.pndetector.de/broxDL

or write to sales@pndetector.de

SILICON DRIFT DETECTORS

for X-ray Spectroscopy

Key benefits

- Wide selection
  5, 10, 20, 30, 60
- Chip-integrated FE
  for optimum detector
  capacitances down to 50
- Polysilicon technology
  for ultralow leakage current
  enabling high performance
  temperature
- pnWindow
  for excellent light element
  up to 20 000
- Energy resolution
  down to 121 eV @ Mn-K
- High count rates
  up to 1 Mcps for sin
  our Multi-Elemen
- Radiation
  > 10

The full product overview including Single Cell Large Area and Multi-Element detectors can be found in