PROCON X-RAY

CT-NANO

The CT-NANO is a fully operating scanning electron microscope with capabilities of Nano-CT measurements on specimen like light-metal-alloys and fiber composites.

It delivers Voxel-sizes in ranges from 39 nm to 3 µm, a geometrical magnification up 5500x and a maximum photon energy of 30 keV. An EDS-Detector provides an additional correlation between XRF signal of specimen and reconstructed volume of the CT-NANO.

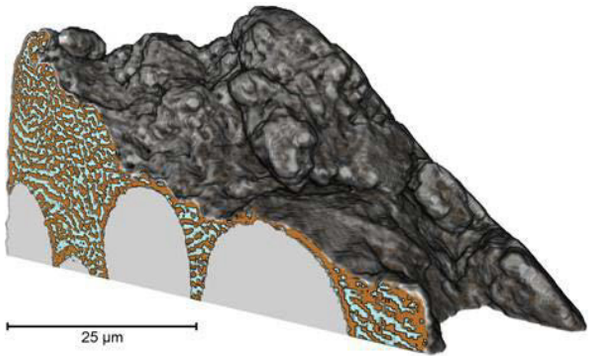
With a direct-converting detector and a size-optimized field-of-view, the CT-NANO provides a representative test volume. The CT-NANO X-ray microscope is based on a scanning electron microscope and uses the electron-beam for generating the x-ray at an ultra-sharp needle with a focal spot size of 70 nm.

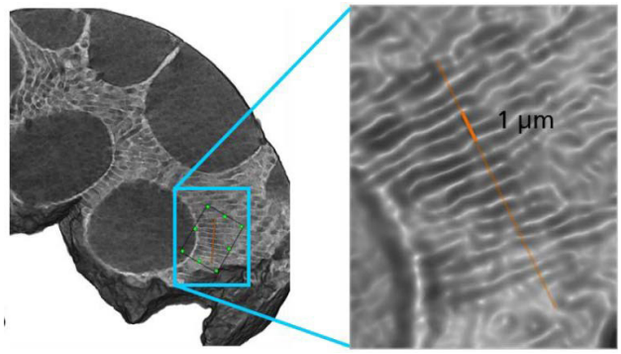
Explore new possibilities for visualisation with 3D X-ray imaging for materials research, life sciences, natural resources and industrial applications.

ProCon X-Ray GmbH
Ludwig-Erhard-Ring 6A
31157 Sarstedt
Germany

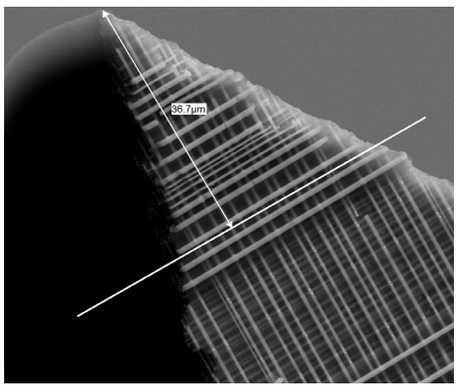
Phone +49 (0) 5066 – 98414-0
Fax +49 (0) 5066 – 98414-99
http://www.procon-x-ray.de
sales@procon-x-ray.de

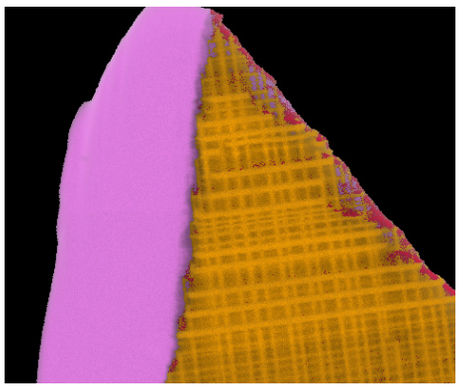
Application Examples

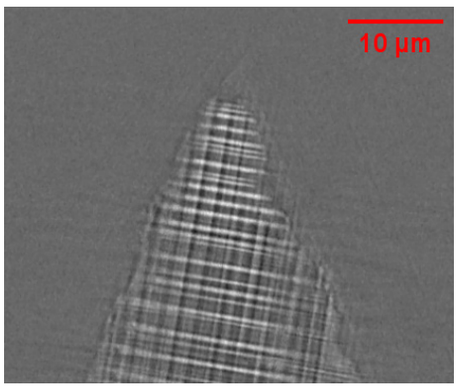




Material Sience
AlCu-Alloy - 3D-Rendering and 2D-Slice with lamellar eutectic structure







Electronics
CPU - SEM-Image, EDX-Image and extracted slice of one circuit layer

Specifications

CT - Mode

FieldOf View	Ø 49 - 3414 µm
Geometric Mag.	20x - 1400x
Voxelsampling	39 - 2.750 nm
Spatial Resolution	up to 60 nm
Reconstruction	TV-SART
	Phase-Contrast

EDS - Mode

Resolution	< MnKα 131 eV
Detector	cooled SSD
Active Area	30 mm²

SEM- Mode

Resolution	< 0.7 nm
Probe current	max. 500 nA
Detector	UED + LED
Electron gun	In-lens Schottky Plus field emission gun

Digital Radiography - Mode

Voltage	max. 30 kV
Current	max. 500 nA
Magnification	20x - 5500x
No. of Pixel	max. 1280 x 1280
Pixel size	55 µm

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