

X-RAY MICROSCOPE

MANUFACTURER : ZEISS

MODEL : Xradia 520 Versa

Applications

- This instrument is capable of non-destructive 3D submicron imaging. It can analyze a wide variety of solid and soft materials including rock, metal, polymers, glass as well as biological hard and soft materials such as stained or unstained tissue.

Analysis

- High resolution image with quantitative and qualitative analysis of 3D architectures
- Observe fracture mechanics, characterize microstructural evolution over time as a function of temperature, tension, oxidation, wetting, etc
- Phase contrast imaging to provide the best contrast for low atomic number materials such as soft tissues
- Higher segmentability of different material types, or different materials with similar densities, with the improved dual energy interface using dual scan contrast visualizer
- Data analysis by experts using Dragonfly software

Characteristics

- Maximum size of the sample: approximately 30 cm³ and 15 kg
- Magnification: 0.4X, 4X, 20X, 40X
- Spatial resolution: 0.7 um
- Achievable minimum voxel size: 70 nm
- Voltage ranges from 30 to 160 kV with maximum 10 W (power)
- Filter: 6 low and 6 high energy filter, and tungsten filter
- Imaging the larger field of view combined with vertical stitching and wide field of view
- Phase contrast imaging using the unique travel distance of both X-ray source and detector
- Dual energy imaging for improved distinguishability of different material types, or different materials with similar densities