



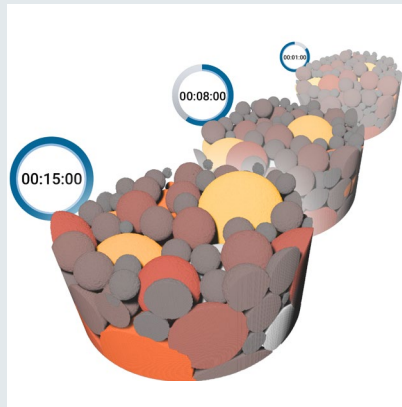
# TESCAN UniTOM HR

FOR MATERIALS SCIENCE AND EARTH SCIENCE

The only micro-CT system to provide sub-micron spatial resolution and high temporal resolution dynamic CT in a single, highly versatile system



▲ Battery cathode foil imaged at 590 nm voxel resolution



▲ Dynamic imaging of soap bubbles at 3.7  $\mu\text{m}$  voxel size and 9.5 seconds temporal resolution.



▲ 40 x 3 cm concrete core. 7 mm volume of interest scanned at 5  $\mu\text{m}$  voxel size.

## Key benefits:

- ✓ **Investigate the smallest of features with spatial resolution down to 600 nm** – A state-of-the-art nano-focus x-ray source, precision stages, and high-quality detectors work together to deliver sub-micron resolution imaging.
- ✓ **Perform true 4D imaging with Dynamic CT** – High temporal resolution, continuous and uninterrupted scanning, and specialized 4D software tools bring synchrotron-like capabilities to the lab
- ✓ **Implement 3D in situ experiments** – continuous sample rotation and scanning enable uninterrupted in situ experiments. Dedicated “no-cable-wrap” interfaces simplify experiment set-up
- ✓ **Accommodate a broad range of samples** – UniTOM HR's high power source (50W), multiple detector options (up to 3) and heavy load stage (45 kg) accommodates samples up to 500 mm diameter X 700 mm high.
- ✓ **Maximize system utilization and throughput** – A fast frame rate detector and a high flux x-ray source combine for high temporal resolution tomography giving you the ability to scan more samples and accommodate more users.

## Applications:

- ✓ High-throughput non-destructive 3D and 4D imaging for **materials research and engineering, failure analysis, and quality assurance**, in a number of areas including:
  - Energy Conversion and Storage
  - Consumer Products and Packaging
  - Aerospace
  - Automotive
  - Additive Manufacturing
  - Pharmaceutical
  - Building Materials
  - Soil Sciences
  - Oil E&P
  - Food Science
  - Advanced Packaging for Electronics