

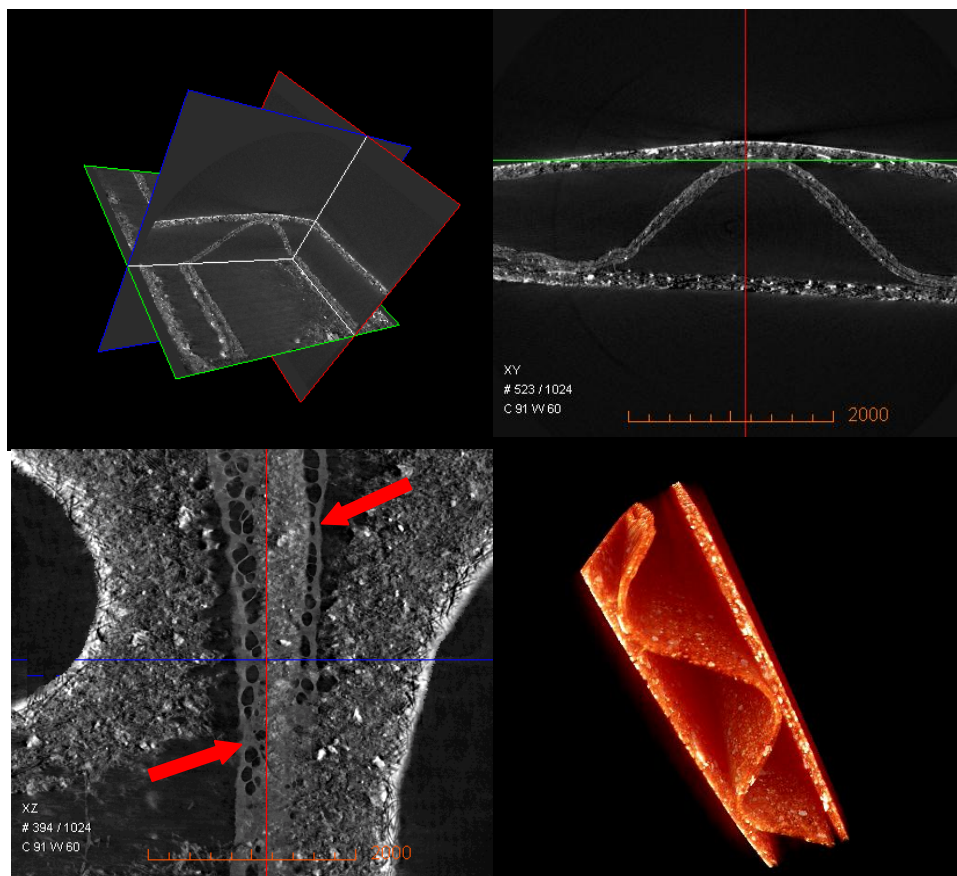
# The X-ray microtomograph – A tool for 3D imaging of wood, paper and board

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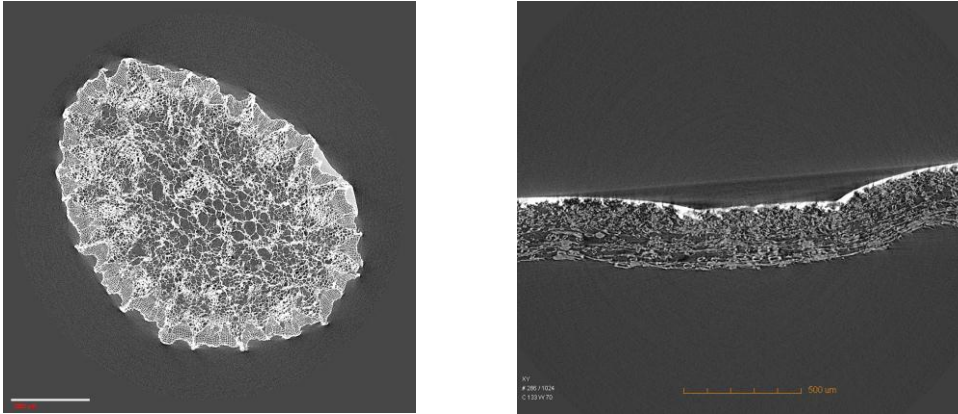
**The instrument reveals the inner structure of material such as wood, paper, board and composites. It requires no sample preparation, provides non-destructive measurements and enables 3D analysis of features in the material.**

## Examples

The instrument produces 3D images of the material, which means it is possible to travel through the material and study different features in any location of the sample. Both 2D and 3D views are available.



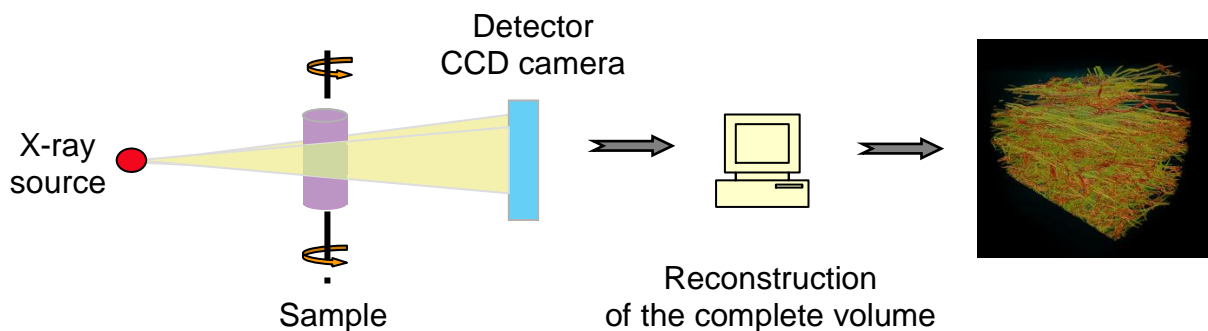
**Different views and details of an imaged corrugated board sample. *Upper left:* virtual sectioning of the sample. *Upper right:* Delamination of fluting. *Lower left:* Glue line (see arrows). *Lower right:* 3D image**



Virtual cross section of the top of a spruce (*left*) and a board sample (*right*).

### How it is done

The rotating sample is scanned using an X-ray source. Images are collected from each angle, and a 3D-image is constructed in the computer. The largest sample size to achieve highest resolution ( $\sim 1 \mu\text{m}$ ) is roughly  $1 \times 1 \text{ mm}$ . The largest possible sample size is approximately  $9 \times 9 \text{ mm}$ , giving a resolution of  $10 \mu\text{m}$  depending on type of sample.



### What you get

- Movie sequence showing the sample in 3D (MPEG format)
- Movie sequences showing the sample when moving through it in x- and/or y- and/or z-direction (MPEG format)
- Single images showing 2D cross-sections of sample (TIFF files)

### Contact

For more information about methods, prices, etc. please contact:



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