Studies on the hierarchical structure of plant based polymers

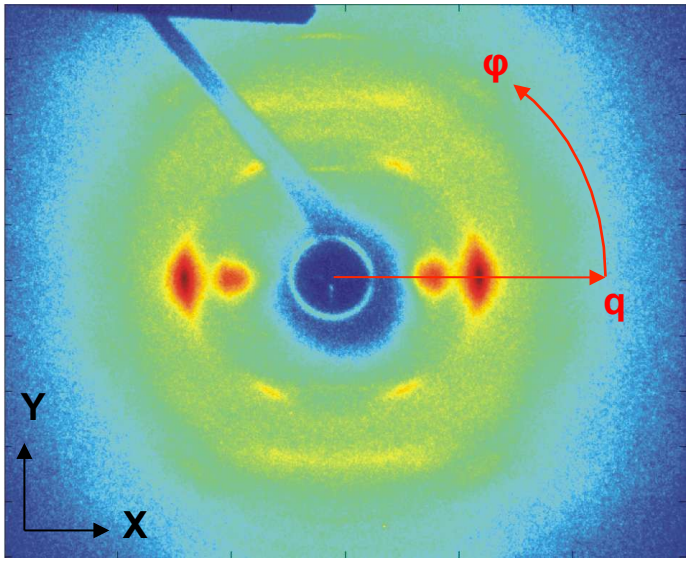
Small-angle neutron and x-ray scattering of enzymatically hydrolysed nanocellulose

Ritva Serimaa

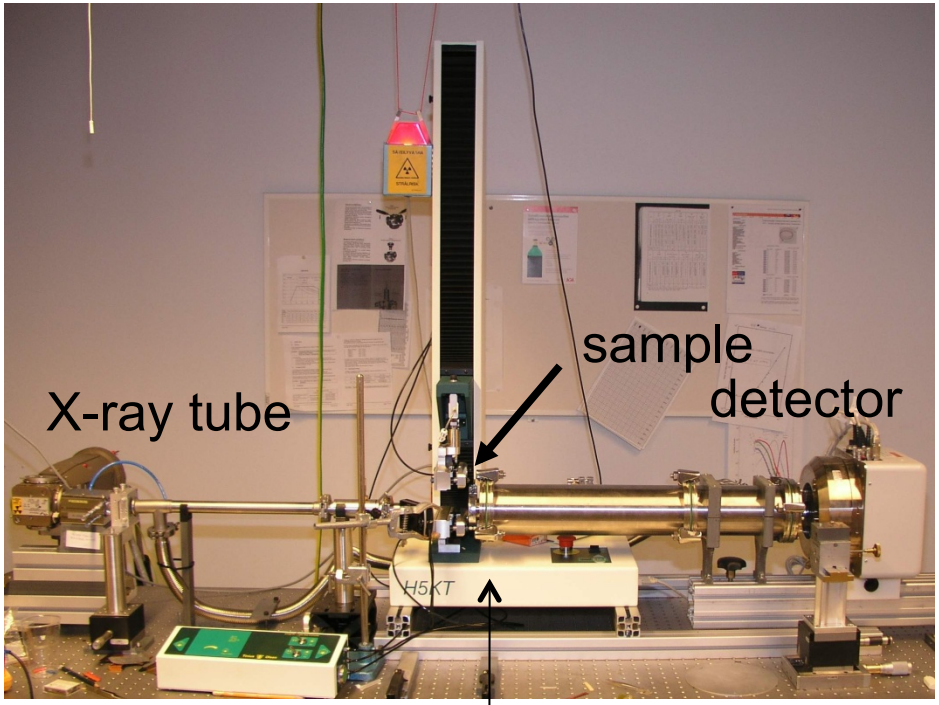
Department of Physics, University of Helsinki

Wide and small angle X-ray scattering (WAXS, SAXS)

Wood cell wall structure

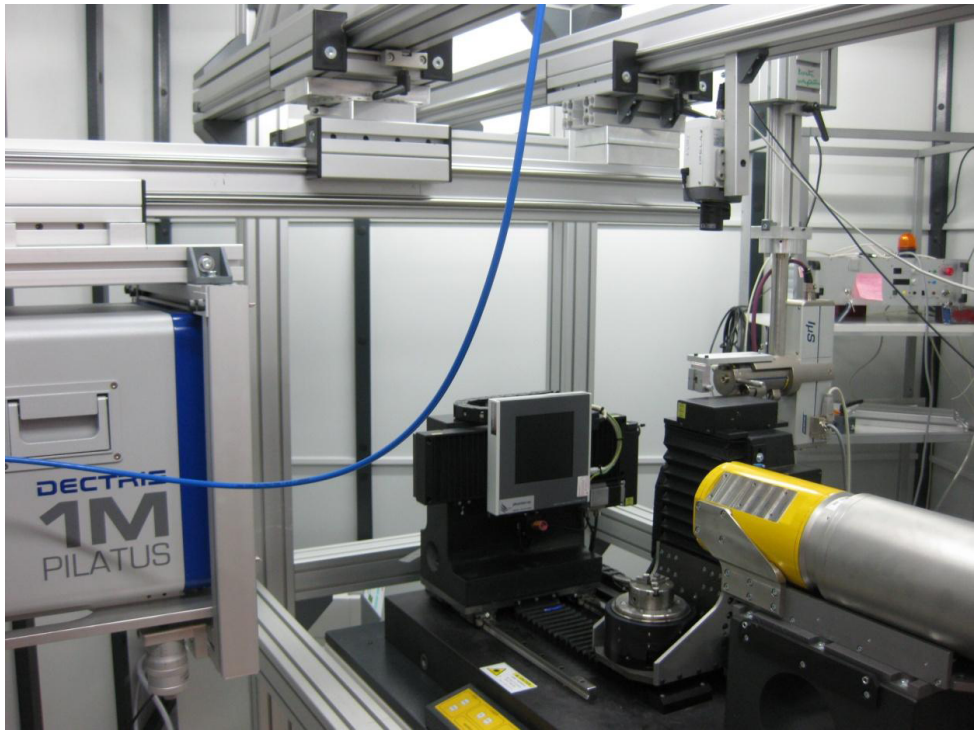


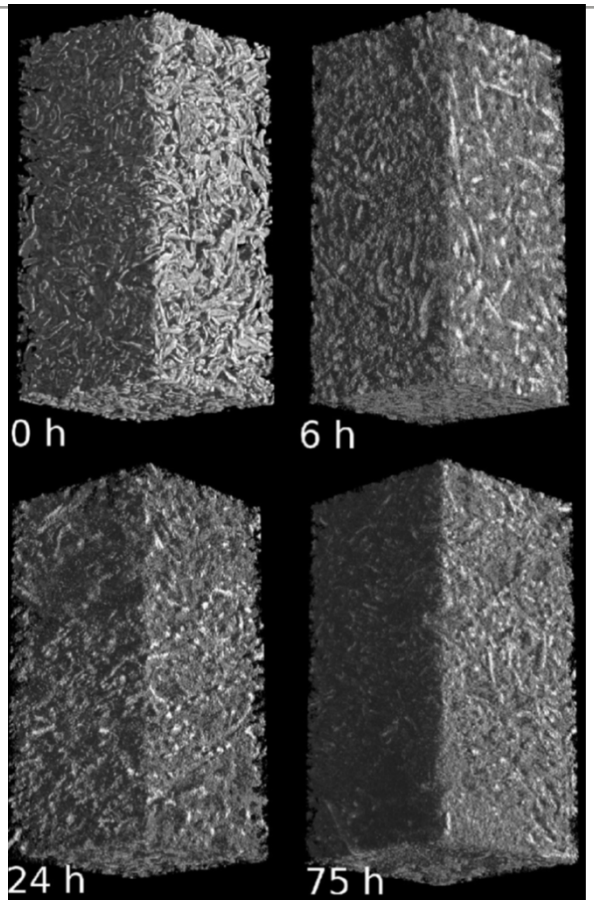
Hybrid aspen, Norway spruce phloem, Gingko



Mechanical testing

Combined X-ray microtomography and SAXS

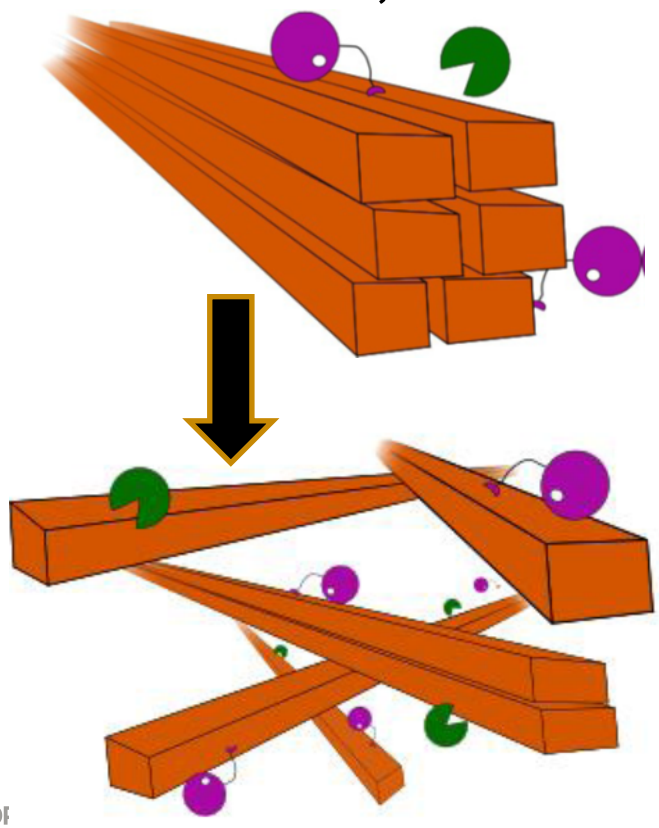
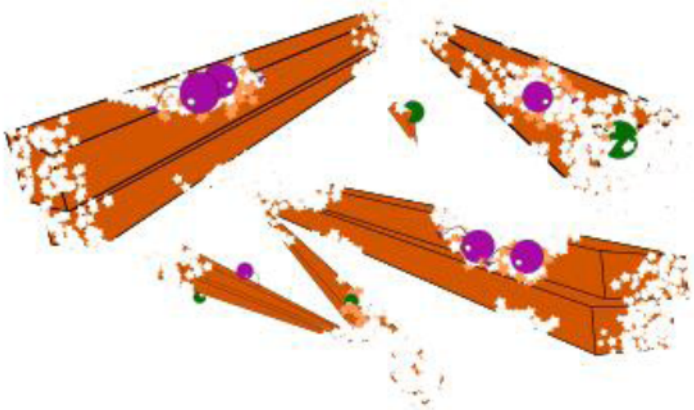




Enzymatic hydrolysis

Enzymatic hydrolysis of nanocellulose to sugar

SAXS, SANS



WAXS: when using nanocellulose as substrate smaller crystallites were seen.