



MAXIN

The image features the word "MAXIN" in a stylized, grey, sans-serif font. The letters are composed of thick, rounded strokes. A vibrant yellow swoosh, resembling a stylized 'C' or a dynamic underline, curves over the letters 'A', 'X', and 'I'. The swoosh starts above the 'A', loops around the top of the 'X', and ends above the 'I', creating a sense of motion and energy.

MAX IV

LABORATORY

A National Swedish Research



Vetenskapsrådet



LUND
UNIVERSITY



REGION
SKÅNE



Karolinska
Institutet



KTH
VETENSKAP
OCH KONST




TRESEARCH



novo
nordisk
fonden



The image shows a close-up of various metallic components of an X-ray microscope. The components are highly polished and feature complex geometries, including flanges with multiple screws and cylindrical sections. The lighting is dramatic, with strong highlights and deep shadows, creating a sense of precision and advanced technology. The background is blurred, focusing attention on the intricate details of the hardware.

Advanced X-Ray microscope



User facility



**SCIENCE
VILLAGE**
SCANDINAVIA



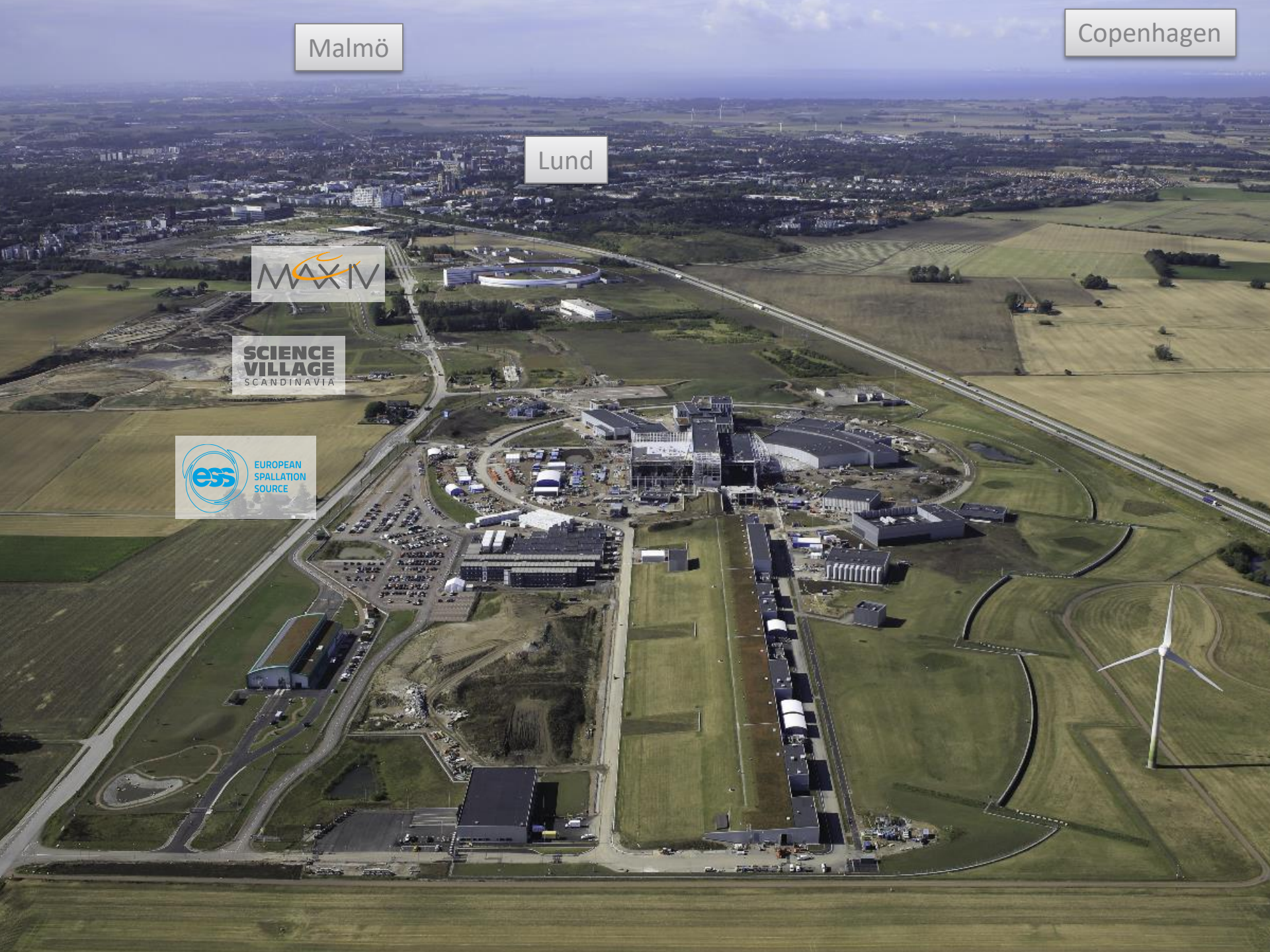
Malmö

Copenhagen

Lund



SCIENCE
VILLAGE
SCANDINAVIA





- Light (X-rays)

- Swedish



- MAX-lab since 1987
MAX IV from 2016
- ..., microscopy, chemical bonds, ...

- Neutrons
(from atomic nucleus)

- 13 member states
(SWE, DK, NOR, ...)



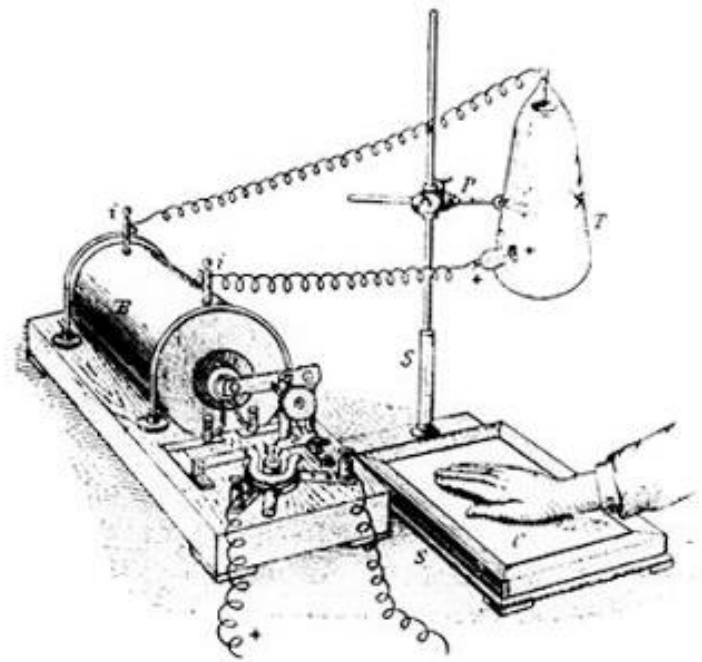
- Building started Sep 2nd 2014
Science starts ≈2023
- ..., large & thick samples,
H/D-substitution, ...

Röntgenstrålning



Dr. W. Röntgen

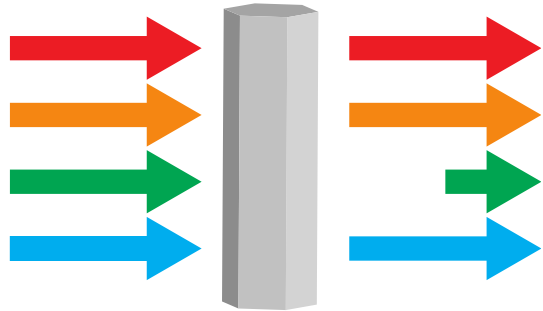
FOTOGRAF GEM. STENB. LIT. AIRST.





→ Elektroner
⚡ Röntgenstrahlung

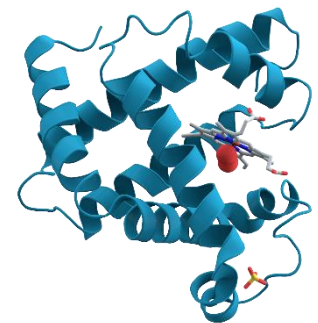
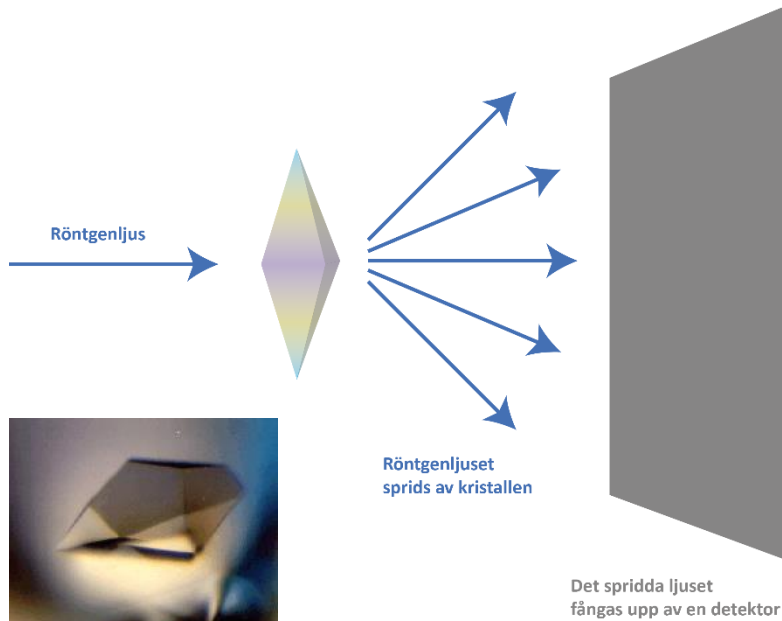
Spectroscopy – chemical, electrical, magnetical information



Imaging – Microscopy and tomography





Scattering – structures, on all levels from atomic to micrometer level

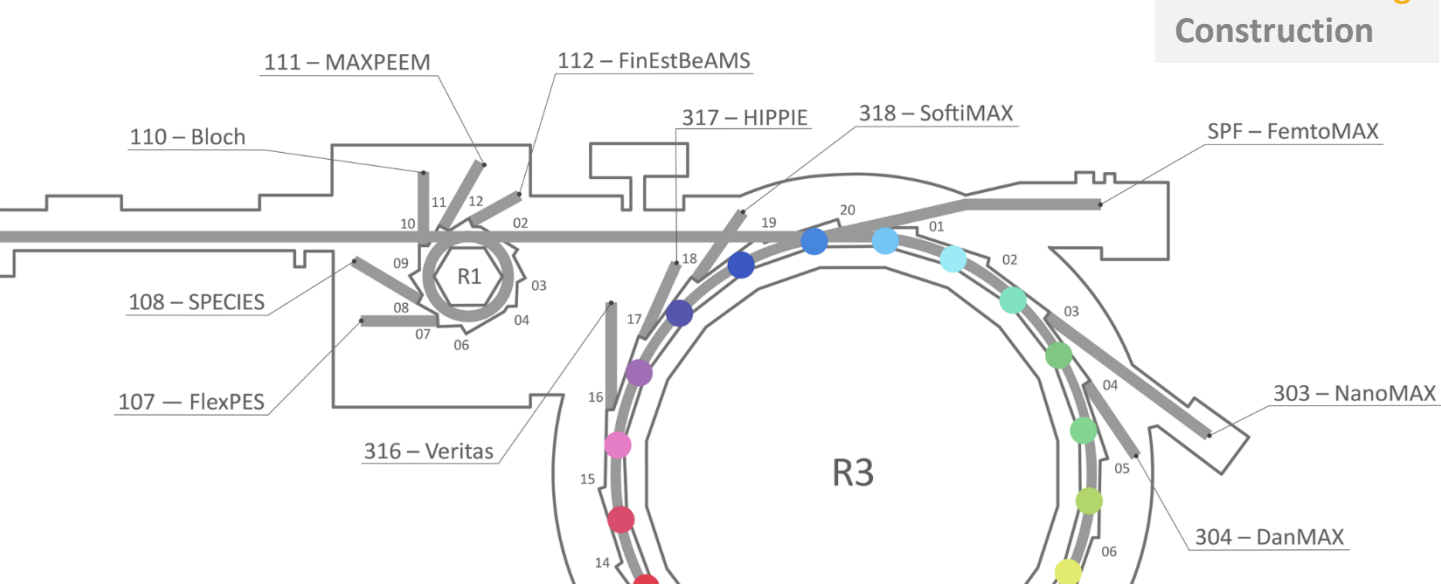


MAX IV beamlines October 2020

Legend:
■ User operation
■ Commissioning
■ Construction

3.0 GeV Ring

- NanoMAX**
Nanofocus & coherence
- DanMAX** 
Imaging & diffraction
- Balder**
EXAFS & RIXS
- ForMAX**
Wood based material
- CoSAXS**
SAXS & coherence
- BioMAX**
Protein structure
- MicroMAX** 
Protein structure
- Veritas**
Excitations in solids & liquids
- HIPPIE**
Operando spectroscopy
- SoftiMAX**
Microscopy & coherence



1.5 GeV Ring

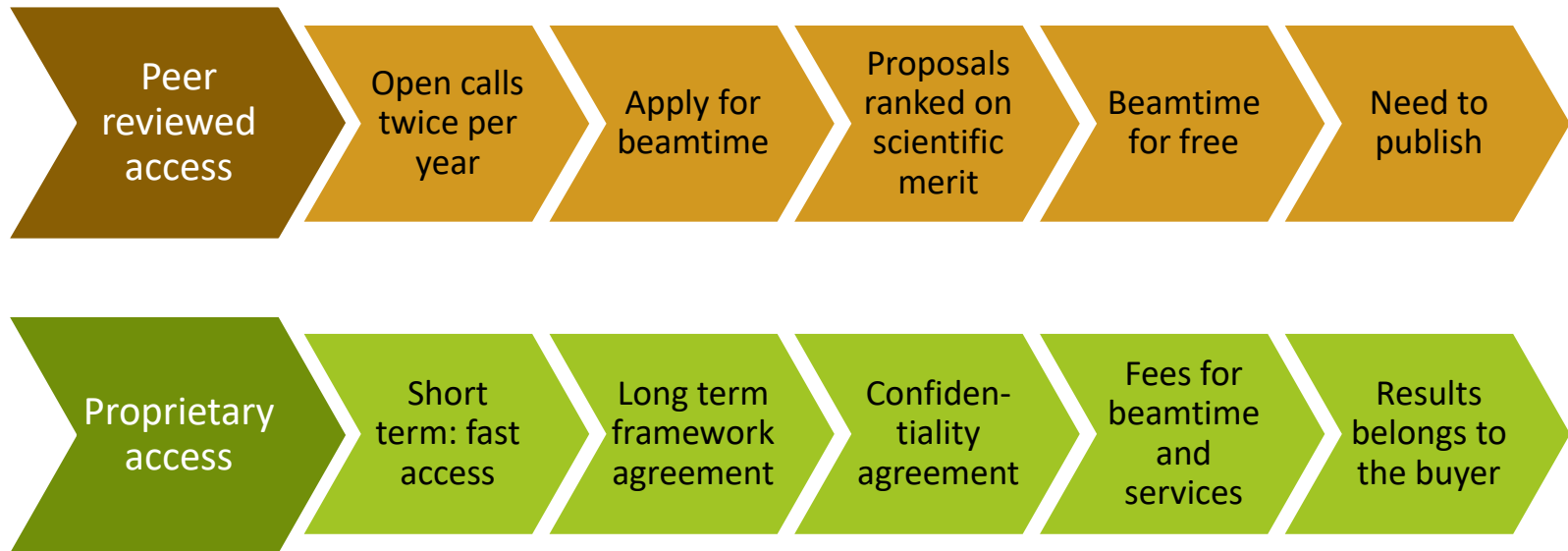
- FlexPES**
Flexible photoemission
- SPECIES**
Photoemission & RIXS
- Bloch**
Electronic structure & surfaces
- MAXPEEM**
Microscopy of surfaces
- FinEstBeAMS** 
Gas phase & luminescence

LINAC

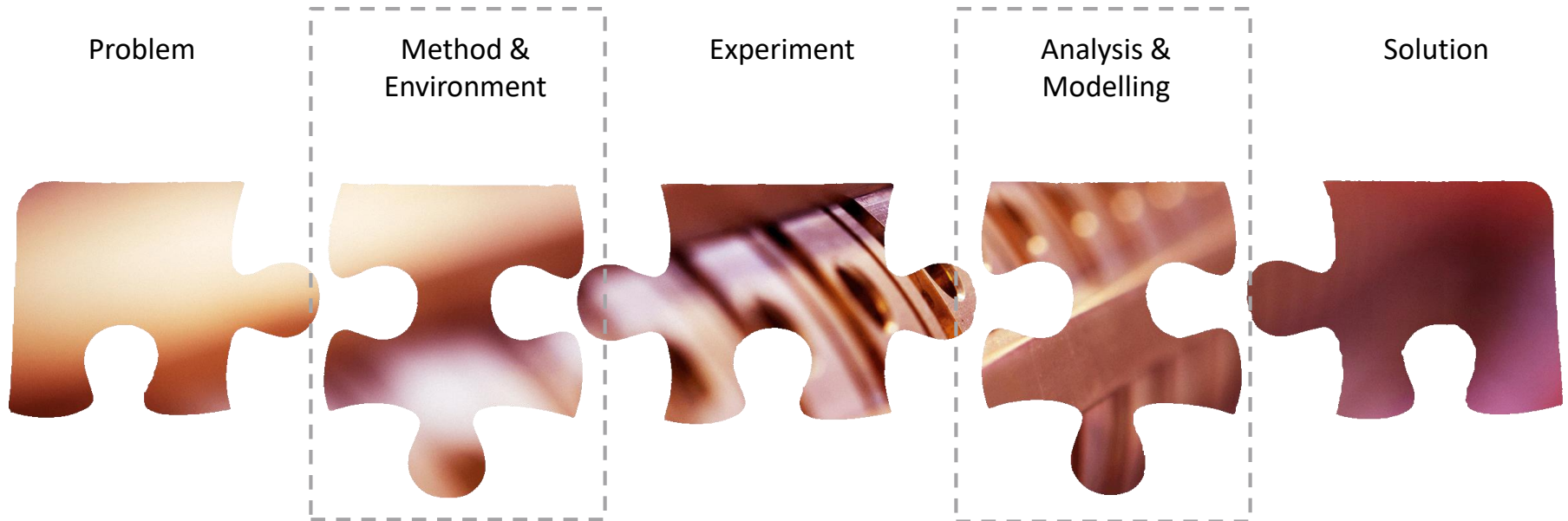
- FemtoMAX**
Ultrafast diffraction & spectroscopy



Two types of access



Planning the experiment



Many different routes into MAX IV





TREESearch

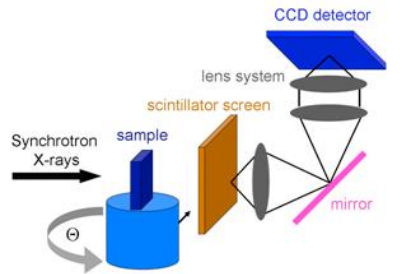
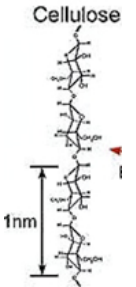
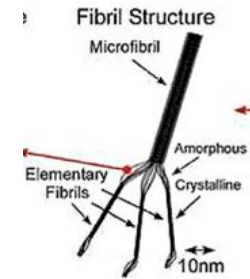
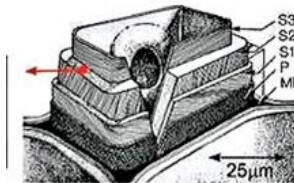
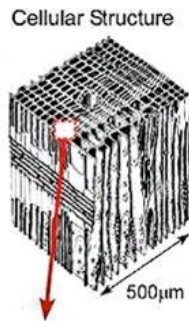
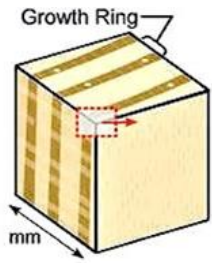
EDUCATION

RESEARCH

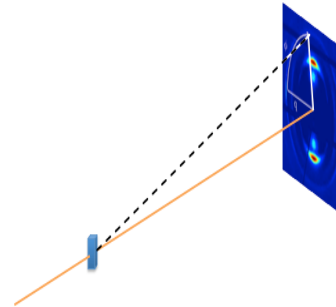
RESEARCH INFRASTRUCTURE

COLLABORATION

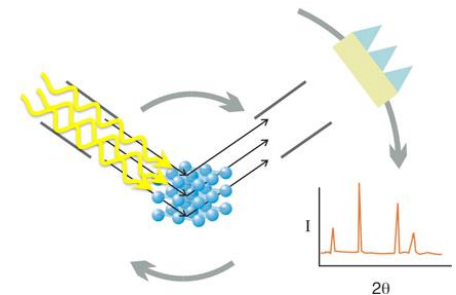
Wood – from Logs to Lignin Molecules



Tomographic imaging



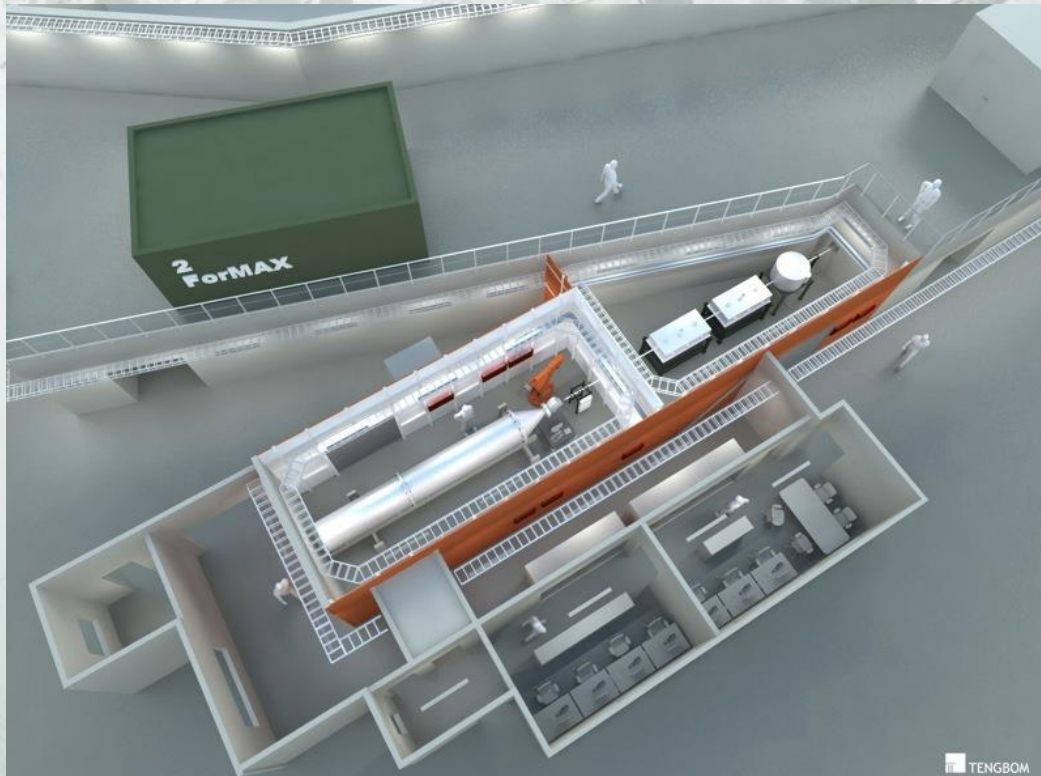
Small angle x-ray scattering
SAXS



Diffraction



TREESEARCH



TENGBOM



CHALMERS

li.u LINKÖPING UNIVERSITY



Mittuniversitetet
MID SWEDEN UNIVERSITY

SLU Swedish University of Agricultural Sciences



BILLERUDKORSNÄS

HOLMEN

NESTE

SCA



SÖDRA

Tetra Pak®

RI SE
Research Institutes of Sweden

VINNOVA
Sweden's Innovation Agency

BIO INNOVATION

Knut och Alice
Wallenbergs
Stiftelse

METALLISKA
MATERIAL

METALBEAMS





NORTHERN LIGHTS ON FOOD

MAXIV **RISE**
LUND INSTITUTE OF ADVANCED NEUTRON AND X-RAY SCIENCE **LINXS**



Thank you!



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