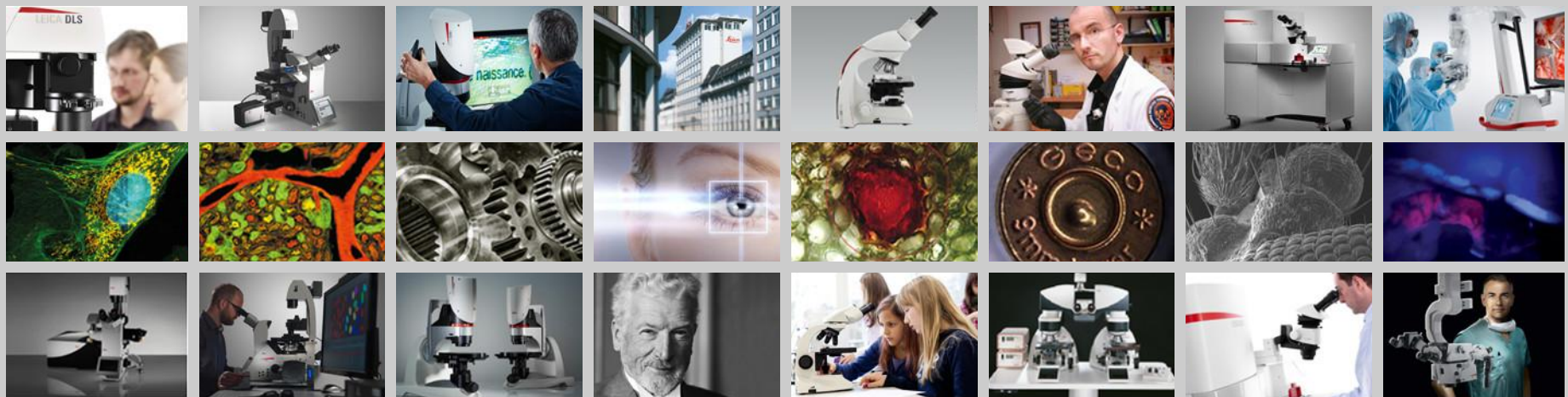


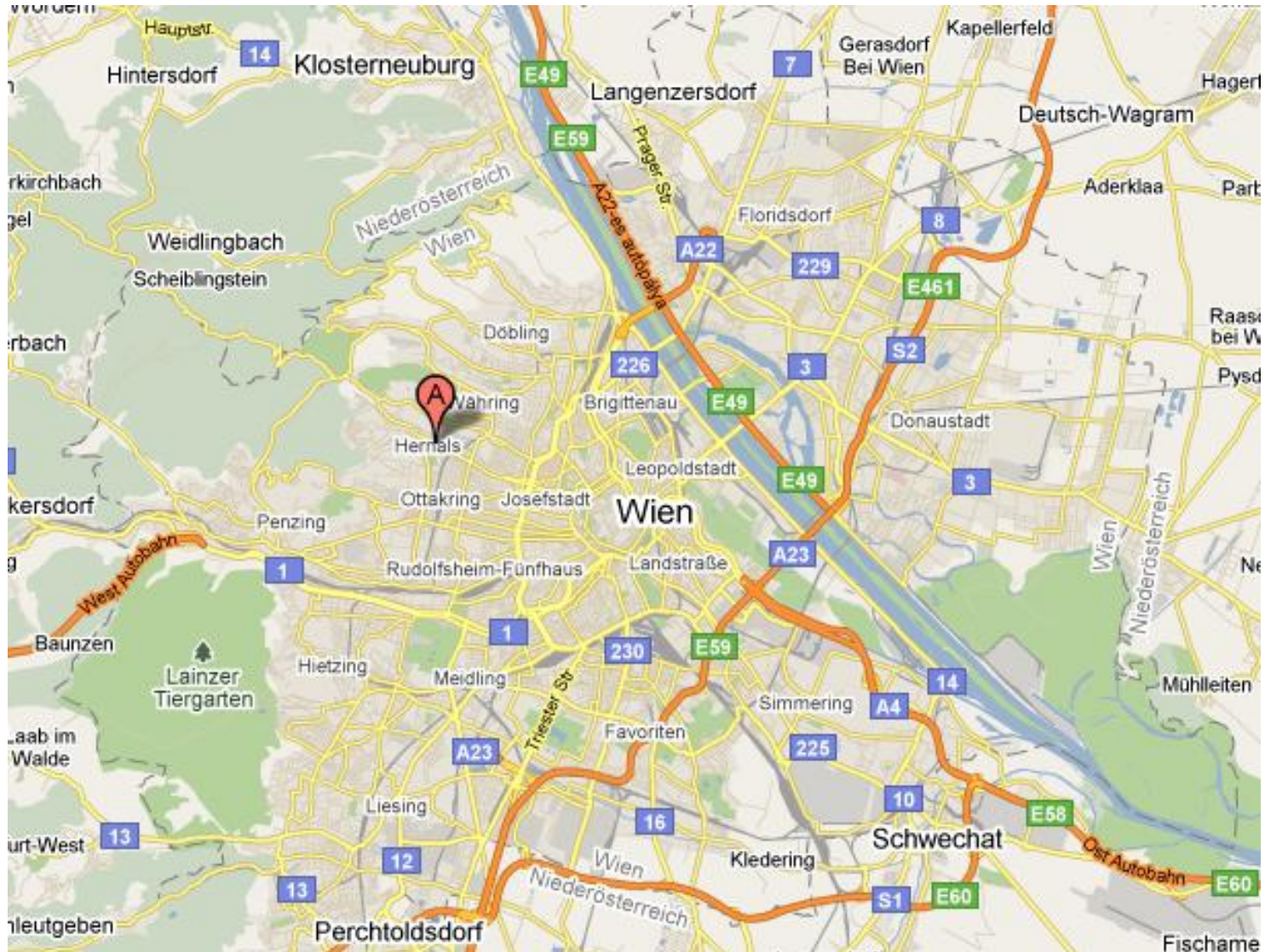
From Eye to Insight



Industrial sample preparation for EM
Leica microsystems
Vienna

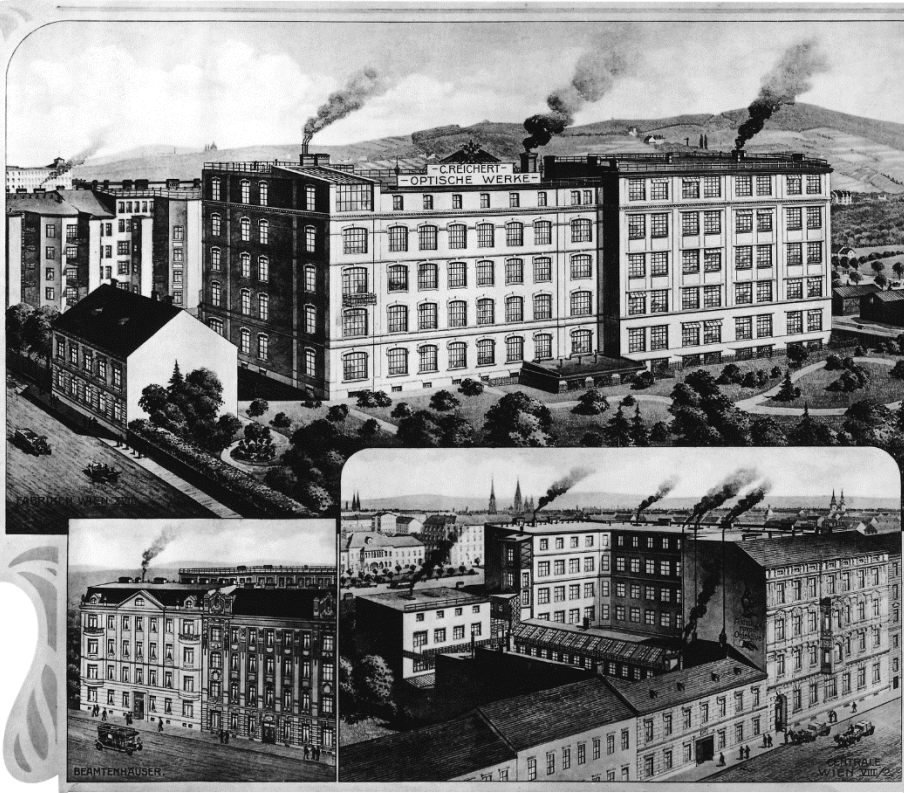


Where we are



140 Years Of Experience

Leica
MICROSYSTEMS



We offer the largest product portfolio
of sample preparation equipment used for
EM investigations
of biological and industrial material

Instruments:



Leica EM TXP



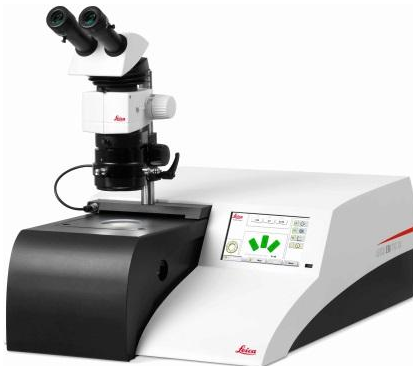
Leica EM UC7



Leica EM FC7



Leica EM VCT500



Leica EM TIC 3X



Leica EM ACE600



Leica EM RES102

Mechanical (target) preparation

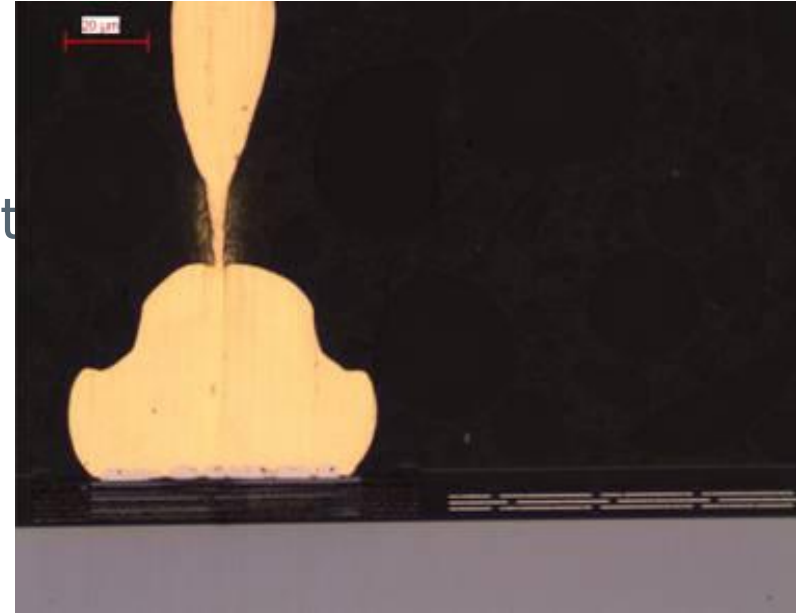
Leica EM TXP

- Target surfacing device for SEM, TEM and LM

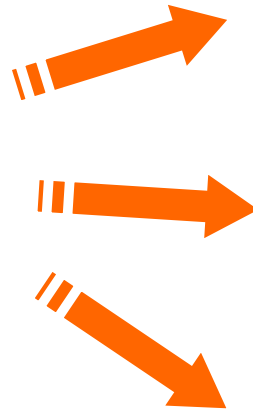


Leica EM TXP

- integrated viewing and distance definition
- multiple process possibilities
- integrated automatic process control



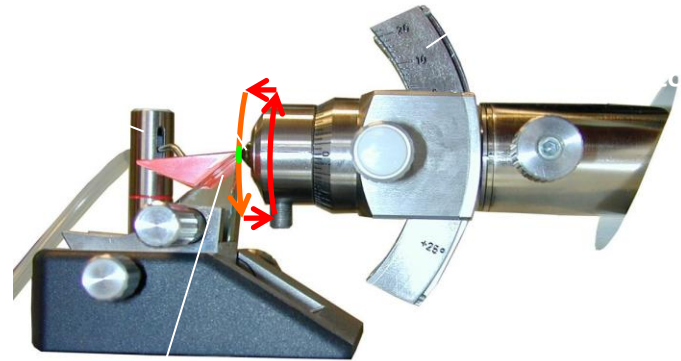
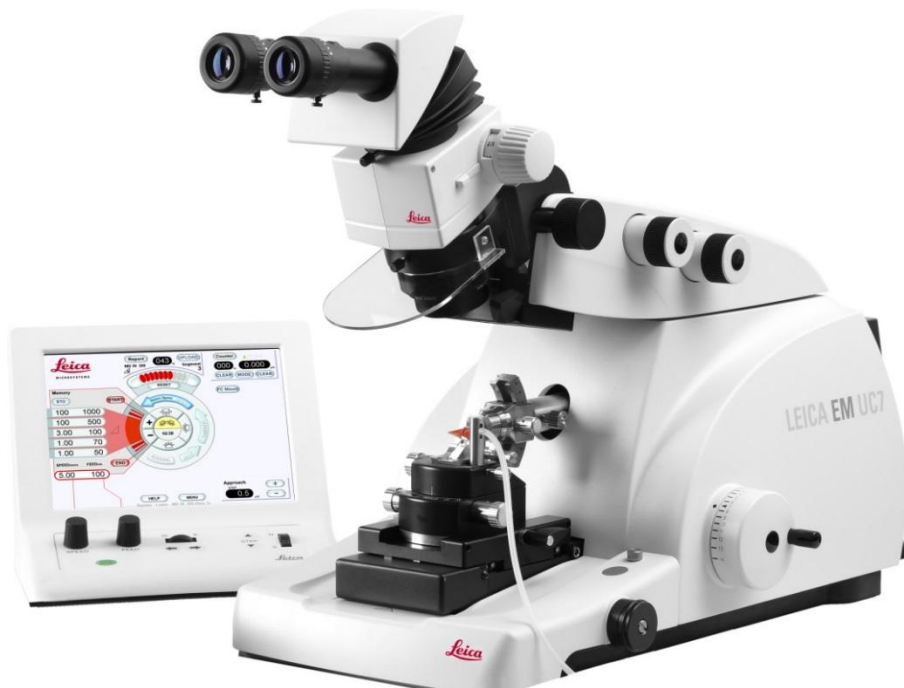
Synergies between Leica EM UC7, EM TIC 3X and EM RES102



Ultramicrotome

Leica EM UC7

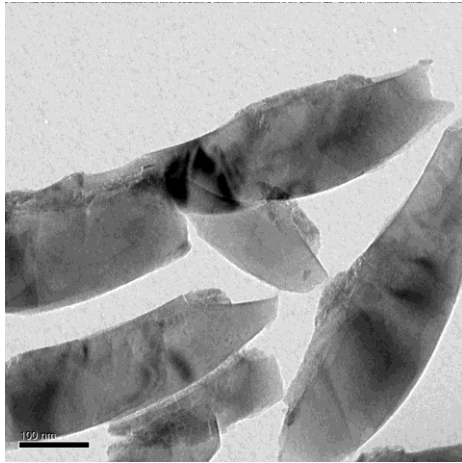
- Preparation device for ultrathin sectioning - TEM, SEM and LM



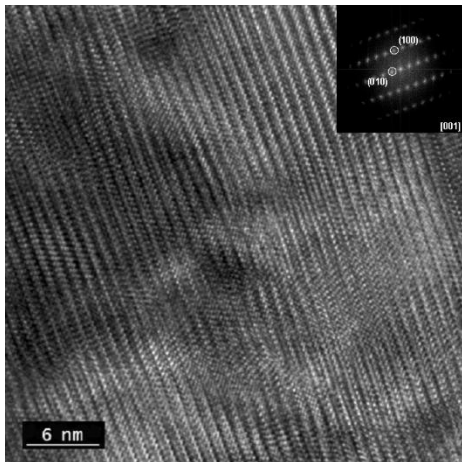
Principle of the Ultramicrotome

Leica EM UC7

Sectioning brittle samples



Olivin meteorite particle,
no embedding,
section thickness 20nm



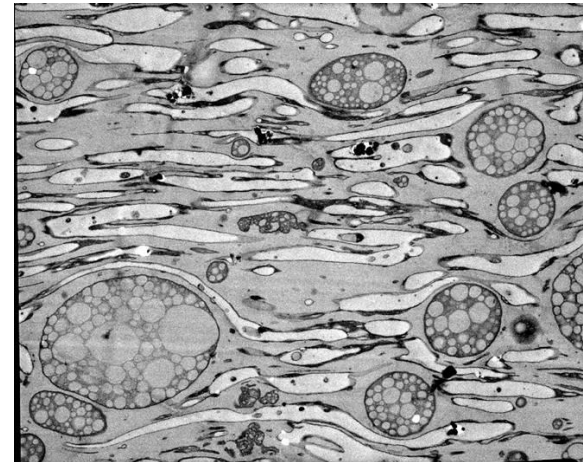
Bertrand Van de Mortèle
Lab. De Science de la Terre, CNRS, Lyon

Sample library
<http://hayabusao.isas.jaxa.jp/curation/hayabusa/index.html>

Cryo-Ultramicrotome

Leica EM UC7+FC7

- Preparation device for ultrathin sectioning of soft material - TEM, SEM and LM



SBS copolymer

Bob Vastenhout
Dow Chemicals Terneuzen

Ion Beam Milling instrument

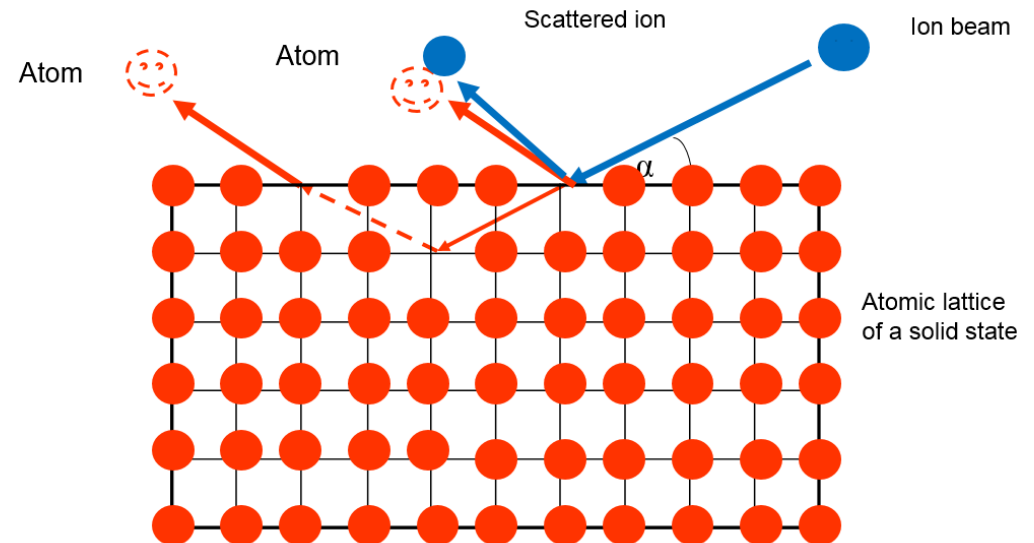
Leica EM RES102

- Preparation device for ion beam milling of samples for TEM, SEM and LM



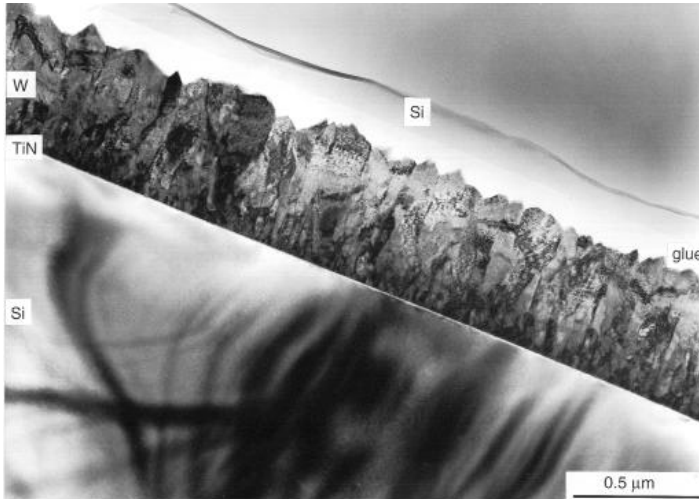
Principle of ion beam milling / polishing e.g. RES102

- Need for high surface quality

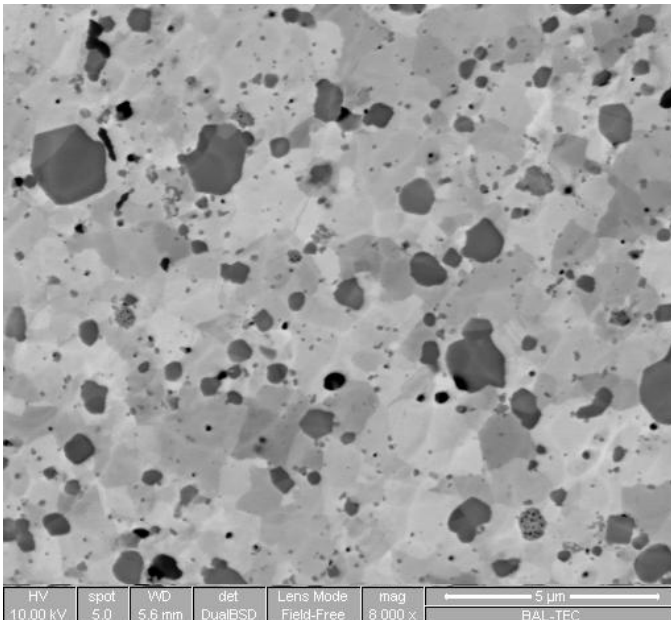


Leica EM RES102

Preparation of hard, brittle and ductile material



W layer deposited on TiN / Si (TEM)

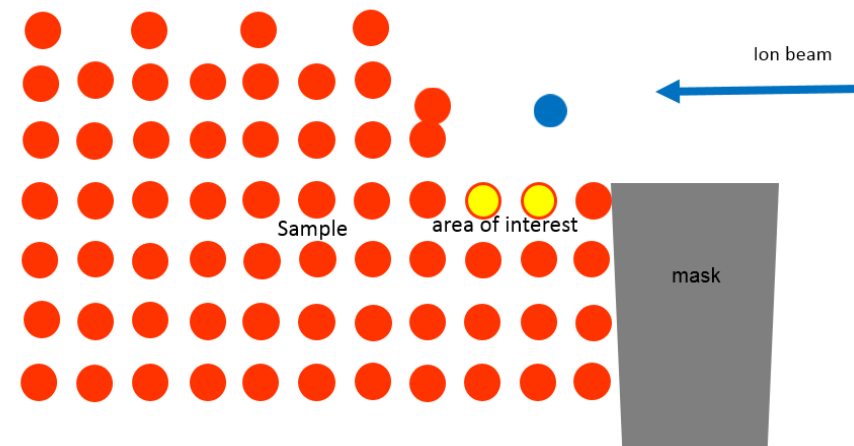
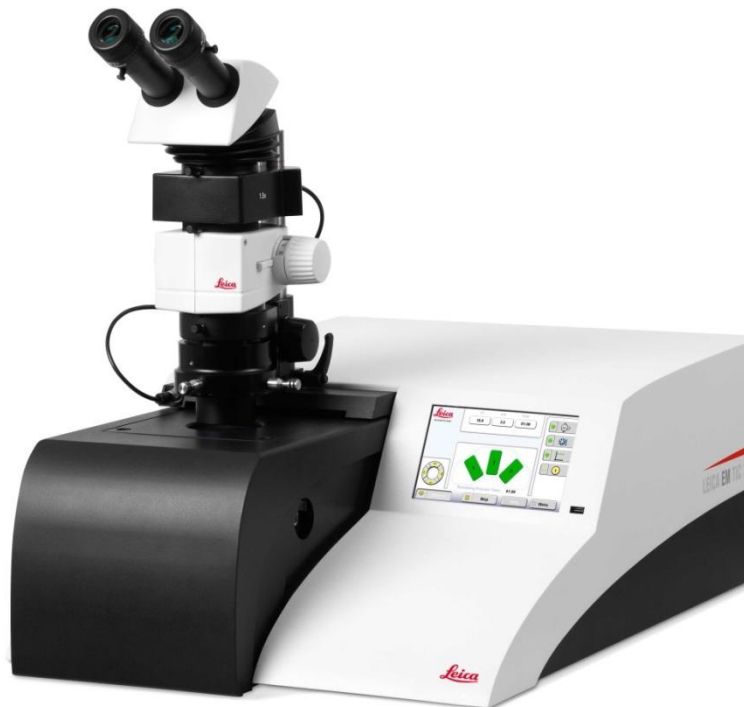


AgSnCu – oxide, ion polished (SEM)

Ion Beam Milling instrument

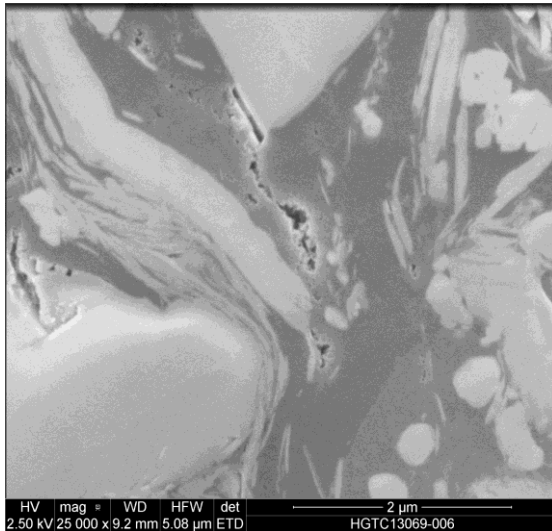
Leica EM TIC 3X

- Preparation device for ion beam milling of sample for SEM and LM

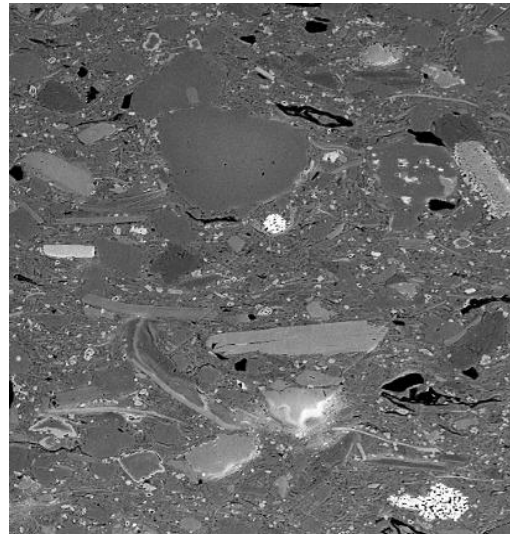


Leica EM TIC 3X

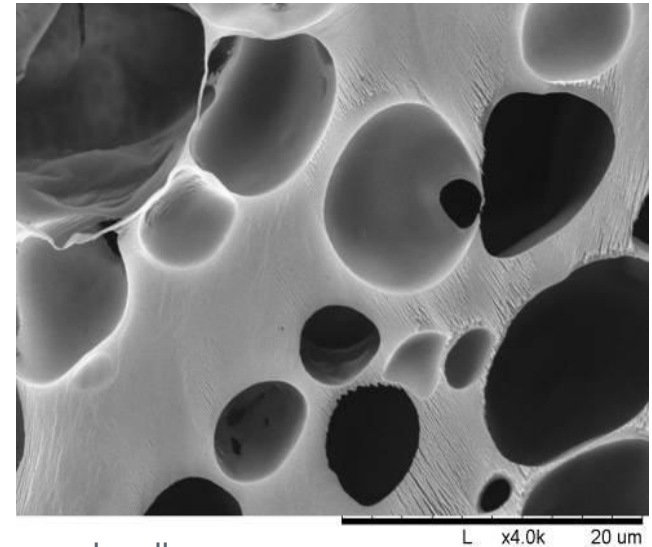
SEM preparation of hard, brittle and soft samples



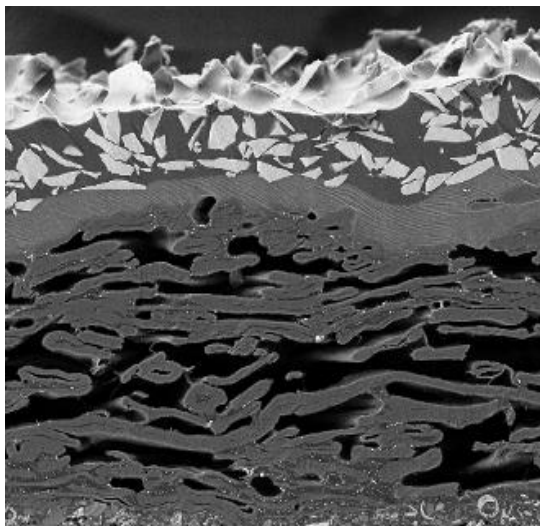
oil shale



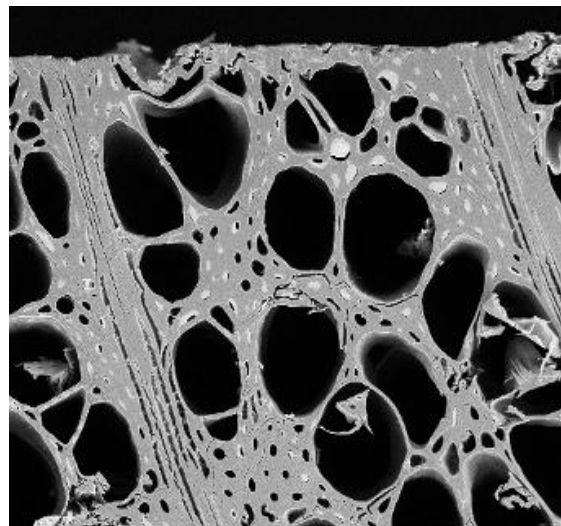
alumina



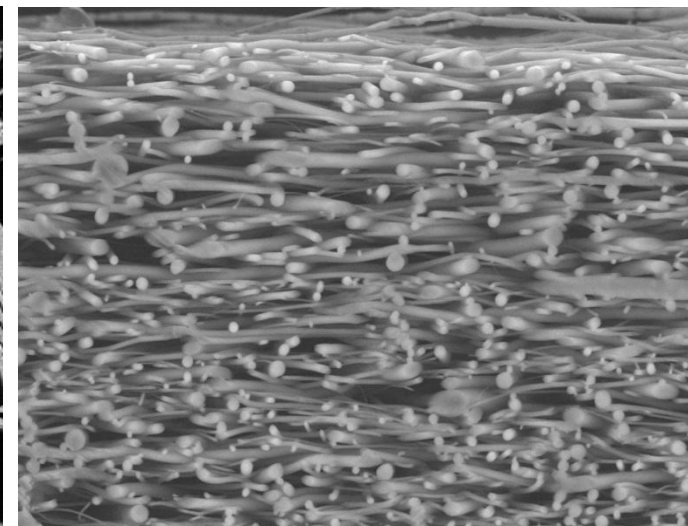
marshmallow



SiC paper



Veneer



coaxial polymer fibers (water-soluble)

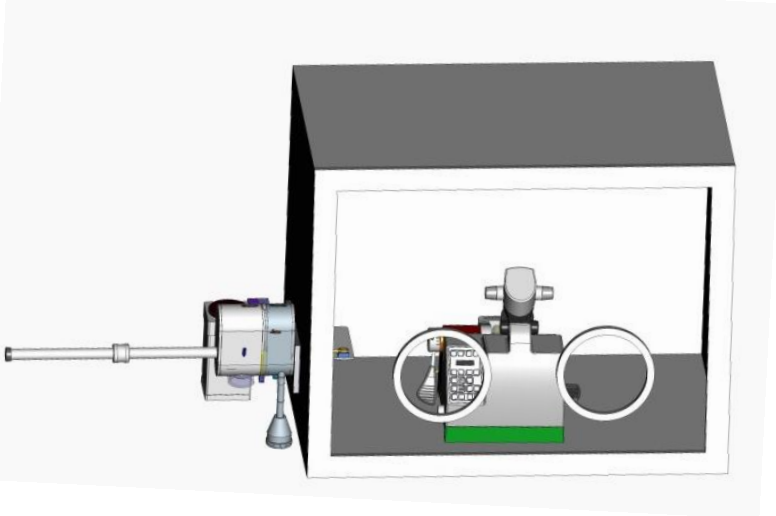
Coater

Leica EM ACE600

- High vacuum coater for FE-SEM and TEM analysis



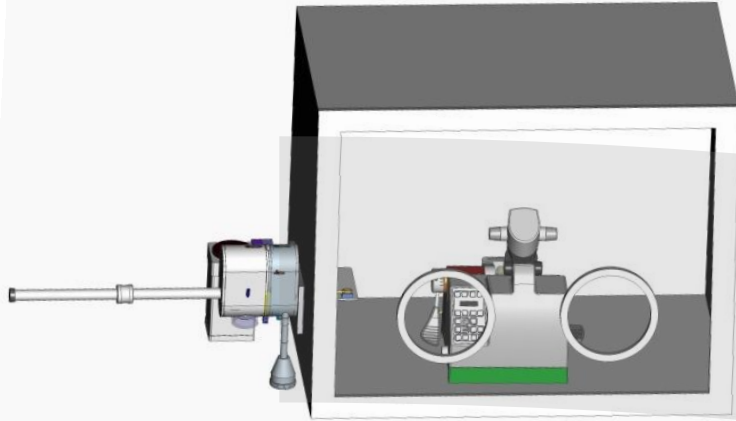
Workflows and connectivity for environmentally sensitive and cryogenic samples



Cryo-Vacuum transfer



Workflow of environmentally sensitive-samples with BIB[®]



EM TXP (can be placed in a glove box) to pre-prepare the sample in order to set the protruded height.



EM TIC 3X with VCT docking station BIB milling



EM ACE 600 with VCT docking station to perform coating

SEM

Workflow of cryo-samples with BIB

EM ICE,
slush of plunge
frozen sample



Cryo-loading station with cryo-saw to perform sample pre-preparation under LN2 conditions



EM TIC 3X with VCT docking station cryo-BIB milling

Cryo-SEM



EM ACE 600 with VCT docking station to perform cryo-coating

Workflow of cryo-samples SEM with UM



EM UC7+FC7 with VCT docking port & "Cryosphere"

Cryo-SEM



EM ACE 600 with VCT docking station to perform cryo-coating

Workflow of cryo-samples TEM with UM



EM FC7 with VCT docking port & "Cryosphere"



Cryo-loading station to perform sample pre-preparation under LN2 conditions or transfer to TEM holder

Cryo-TEM

Thank you for your attention!