

1. FACILITY				2. EQUIPMENT				3. SAMPLE PREPARATION AT FACILITY		4. APPLICATION					
EXCITE partner	Facility name	Facility contact	Facility address	Data acquisition and processing software	Available equipment	Equipment type	Equipment short description	Sample preparation offered?	Max access per proposal	Access mode	Equipment availability				
Universiteit Utrecht (UU)	EM Centre	Hannah Vogel (h.p.vogel@uu.nl)	Yalelaan 1, 3584CL, Utrecht, NL	Avizo, Aztec, Esprit, Zen, Atlas, Velox, GMS3, STEMx, Donovan, Zeiss Reconstructor.	Helios Nanolab G3 (FIB-SEM)	EM	FIB-SEM with Cryostage, Nordlys EBSD, Oxford xxx EDS, Gatan CL.	No. Only carbon coating at facility. Samples must be prepared by the user according to the facility specifications.	5 days	Remote or Physical	01-02-2025 - 31-07-2025				
	NanoSIMS	Lubos Polerecky (nanoSIMS@uu.nl)	Princetonlaan 5, 3584 CB, Utrecht, NL	Look@NanoSIMS software.		Gemini 450 (SEM)	EM		High-end SEM with low vacuum capabilities. Symmetry EBSD detector, Oxford xxx EDS, Delmic CL, Quorum Cryostage.	5 days	Remote or Physical	01-02-2025 - 31-07-2025			
EVO 15 (SEM)						EM	Environmental SEM with Peltier cooling stage, 2x Bruker EDS and automated mineralogy.		5 days	Remote or Physical	01-02-2025 - 31-07-2025				
Spectra 300 (STEM)						EM	30-300 kV (STEM). Double aberration corrected microscope with a variable acceleration voltage (30, 80, 200 and 300 kV), enabling high-resolution imaging up to 50 µm both in TEM and STEM imaging mode. Equipped with EDX spectrometry for chemical mapping, and ultra-high-resolution electron energy loss spectrometry (JHR-EELS) enabled by its double monochromator and Gatan Continuum filter. It also has a direct-direction Gatan K3 IS camera allowing imaging of soft and beam-sensitive materials.		5 days	Remote or Physical	01-02-2025 - 31-07-2025				
Talos F200X (STEM)						EM	200 kV (STEM). High-brightness X-FEG electron gun, high-resolution imaging up to 1.1 Å, electron diffraction, electron tomography, and high-sensitivity 2D EDX chemical mapping (Super-X).		5 days	Remote or Physical	01-02-2025 - 31-07-2025				
JXA-BS30F HyperProbe (EPMA)						EM	Field Emission Electron probe microanalyser, equipped with 5 WDS spectrometers, SDD ED system, CL system (panchromatic imaging and xCLent hyperspectral CL).		5 days	Remote or Physical	01-02-2025 - 31-07-2025				
Xradia 610 Versa (µ-CT)						X-Ray	High-resolution X-ray tomography microscope system equipped with a 160kV high-energy, high-power microfocus X-ray source, several high-contrast detectors and a large flat panel detector as well as in situ experimental capabilities.		10 days	Remote or Physical	01-02-2025 - 31-07-2025				
Universiteit Gent (UGent)	UGCT	Laurenz Schriber (Laurenz.Schriber@UGent.be)	Proefuinstraat 86, 9000, Gent, BE	Octopus, Panthera, VGStudioMax, Avizo, Dragonfly. µ-CT add-on modules are also available for direct observations of fluid flow and weathering experiment. Add-on modules can be made available after initial discussion with the beamline scientist prior to submission of the proposal. Add-on modules are available for fluid flow experiments under low confining stresses (max. 30 bar) and without temperature control. Both the fluid flow cell and the pumps can be made available upon request. Also a Deben CT5000 in-situ compression and tensile cell is available (deben.co.uk and doi.org/10.1007/s10064-018-01448-0), as well as a custom-made freezing cell (doi.org/10.1016/j.conbuildmat.2020.118515).	HECTOR (µ-CT)	X-Ray	The High-Energy CT system Optimized for Research or HECTOR is the workhorse of our systems. It is equipped with a 240 kV X-ray tube from X-RAY WorX, a Varex XRD 4343 flat-panel detector and a rotation stage able to carry samples up to 80 kg. Mounted on a total of 5 motorized linear stages, this system covers a very wide range of samples with a best achievable spatial resolution of approximately 3 micron and an image resolution of 2800x2800 pixels. Two additional piezo stages allow for an exact positioning of the sample on the rotation axis.	10 days	Remote or Physical	01-02-2025 - 31-07-2025					
					EMCT (µ-CT)	X-Ray	The Environmental Micro-CT or EMCT system is a rather unique, gantry-based high-resolution setup developed for fast CT scanning and in-situ monitoring. The design of a horizontal gantry allows for the installation of a large number of add-on modules such as flow cells, pressure stages, temperature stages, in a convenient vertical position without a limitation on tubes and wires. Furthermore, the components are chosen to enable fast and continuous CT scanning at up to 2 full rotations per minute.	10 days	Physical	01-02-2025 - 31-07-2025					
					Medusa (µ-CT)	X-Ray	The very high resolution scanner Medusa combines a Photonic Science VHR detector with a large-area Varian flat-panel detector to allow for both low-density objects such as biological tissue, and high-density samples such as geomaterials. Both detectors are mounted on motorized linear stages for easy and fast switching and high accuracy. The setup also allows for a very long propagation distance of 1.4m, which can be exploited for phase-contrast experiments. The FeinFocus transmission tube allows for a resolution of approximately 0.9 µm and for X-ray targets of different material and thickness.	10 days	Remote or Physical	01-02-2025 - 31-07-2025					
					Herakles (µ-CT / µ-XRF)	X-Ray	The combined micro-CT - micro-XRF system Herakles combines three scanning stages for extensive sample characterization. One high-resolution CT stage is complemented with two micro-XRF stages, where the three stages are linked by an innovative air-bearing positioning system which offers a sub-micron accuracy over the complete setup, necessary for the image correlation. Voltages between 20 and 100 kV can be applied, with a maximum target power of 10 W when using a microfocus spot. The smallest achievable spot size is 700 nm, as specified by the manufacturer, the voxel size during typical scans on real-life samples is around 1 µm.	10 days	Physical	01-02-2025 - 31-07-2025					
					Nanowood (µ-CT)	X-Ray	This versatile multi-resolution X-ray tomography scanner is equipped with two separate X-ray tubes and two different X-ray detectors to allow for optimal scanning conditions for a very wide range of samples. The open-type Hamamatsu transmission tube is used for very high resolution CT scans, where a resolution of approximately 0.9 micron can be achieved (given very small samples), whereas the closed-type Hamamatsu directional tube head is used for larger samples. On the detector side, an 11 megapixel Photonic Science VHR CCD camera with a pixel size of approximately 77 µm ² is complemented with a large-area Varian flat-panel detector.	10 days	Remote or Physical	01-02-2025 - 31-07-2025					
					CoreTOM (µ-CT)	X-Ray	A versatile micro-CT system optimized for multi-scale 3D and high temporal resolution 4D imaging from core samples down to pore samples. Key benefits: • Multi-scale imaging from core down to pore/grain scale • Volume-of-Interest Scanning (VOIS) • Scan up to 1 m tall cores • Fast scanning & high sample throughput • In situ integration option • Dynamic micro-CT acquisition with temporal resolutions < 10 seconds • Software tools for dynamic acquisition, reconstruction and visualization	10 days	Remote or Physical	01-02-2025 - 31-07-2025					
Helmholtz-Zentrum Dresden-Rossendorf (HZDR)	HIE	Axel Renno (a.renno@hzdr.de)	40, Chemnitz Strasse, 09599, Freiberg, DE	Avizo, Panthera.	CoreTOM (µ-CT)	X-Ray	Core-Tom (tescan), Resolution >5µm, Sample sizes < 15 cm diameter and < 90 cm high. Possibility to measure ledge of elements inside sample. Possibility of in-situ / time-lapse studies that require large rigs.	3 days	Physical	01-02-2025 - 31-07-2025					
					Quanta 650 MLA (FEG-SEM)	EM	The SEM is connected to two detectors for performing energy dispersive X-ray spectroscopy (EDS). It is equipped with the MLA-Suite software from FEI for a rapid, spatially resolved, automatic, petrographic analysis of solid samples.	3 days	Physical	01-02-2025 - 31-07-2025					
					TORNADO M4+ (µ-XRF)	XRF	The M4 TORNADO PLUS is a micro-XRF instrument designed for the detection of light elements. Two different X-ray tubes (Rn and W) are available with different spot sizes. The device is equipped with two EDS detectors. It can be operated in air under vacuum or with He flushing. AMICS is available as a software solution for automated mineralogy applications.	3 days	Physical	01-02-2025 - 31-07-2025					
					JXA-BS30F HyperProbe (EPMA)	EM	Field Emission Electron probe microanalyser, equipped with 5 WDS spectrometers, SDD ED system, CL system.	3 days	Physical	01-02-2025 - 31-07-2025					
					TIMA-X GMS (SEM)	EM	TIMA-X is an automated mineralogy system for fast quantitative analysis of samples such as rocks, ores, concentrates, tailings, leach residues or smelter products. TIMA-X combines BSE and EDX analysis and offers the possibility for cathodoluminescence investigations	3 days	Physical	01-02-2025 - 31-07-2025					
Deutsches GeoForschungszentrum Potsdam (GFZ)	PISA	Vladimir Roddatis (roddatis@gfz-potsdam.de)	Telegrafenberg, D-14473, Potsdam, DE	Velox, TIA, Digital Micrograph, Tomography, Nanomegas, Avizo, QSTEM, Dr. Probe, TEAM, TSL OIM, Slice&View.	Tecnai F20 G2 X-Twin (FEG-TEM)	EM	FEI Tecnai G2 F20 X-Twin (200 kV) (space resolution is < 0.3 nm at 200 kV; FEG electron source; HAADF Detector; Gatan Tridim (EELS, EFTM); EDAX energy dispersive X-ray spectroscopy system; TEM sample holders: Gatan double-tilt holder; Single-tilt tomography holder; low background double-tilt holder; Single-tilt rotation holder; Gatan double-tilt liquid nitrogen holder; Gatan heating holder.	4 days	Remote or Physical	01-02-2025 - 31-07-2025					
					Themis Z (FEG-STEM)	EM	ThermoFisher Scientific Themis Z (3.1); Cs S-CORR Probe Corrector (80-300 kV) (space resolution is < 0.06 nm at 300 kV; X-FEG electron source with a monochromator (energy resolution is < 0.3 eV); HAADF, DF2, DF4 and BF Detectors; STEM Imaging of light elements; SuperX energy dispersive X-ray spectroscopy system; Gatan Imaging Filter Continuum ER1065 (EELS, EFTM); TEM, STEM and EDX Tomography Data Acquisition Software; Low-dose Exposure Technique; Precession electron diffraction.	3 days	Remote or Physical	01-02-2025 - 31-07-2025					
					Quanta 3D (FEG-FIB-SEM)	EM	A FEI (ThermoFisher Scientific) Quanta 3D FEG is a state-of-the-art Dual Beam device. SEM column optimized for high-brightness & high-current at acceleration voltage from 2kV to 30kV and probe currents from 1pA to 65 pA. Magnifications: x30 - x1.000.000; SE & BSE detectors; Low-vacuum SED (used in low vacuum mode); EDAX TEAM software for EBSD and EDS. Maximum electron beam resolution - 0.8 nm at 30kV; Focused Ion Beam Column: Ion source - 1kV to 30 kV, Maximum ion beam resolution - 7 nm at 30kV. Omniprobe nanomanipulator. In situ Pt and C gas injection systems. Avizo Fire for 3D reconstruction in nanotomography.	5 days	Remote or Physical	01-02-2025 - 31-07-2025					
					Helios G4 Dual Beam (FIB-SEM)	EM	ThermoFisher Scientific Helios G4 Dual Beam Helios G4 UC. Resolution: 0.6 nm at 30 kV STEM, 0.7 nm at 1 kV, 1.0 nm at 500 V (CD). Electron beam current range: 0.8 pA to 100 nA, accelerating voltage range: 200 V to 30 kV. Maximum horizontal field width: 2.3 mm at 4 mm WD. Ion beam current range: 0.1 pA to 45 nA, accelerating voltage range: 500 V to 30 kV. EStar in-lens SE/BSE detector; Everhart-Thornley SE detector (ETD); Retractable STEM+ detector with BF/DF/HAADF segments; Gas Injection System; Easylift for precise in situ sample manipulation; AutoTEM wizard automated sample preparation.	3 days	Remote	01-02-2025 - 31-07-2025					
					Ultra Plus (FEG-SEM)	EM	The ZEISS Ultra Plus field emission scanning electron microscope allows recording of high-resolution images. The complete detection system of the Ultra Plus combines various detectors: the In-Lens & SE detector for high-resolution images, the In-Lens Energy Selective Backscatter Detector (EsB) & Annular Backscatter Detector (AsB) for an impressive material contrast of each sample, and energy dispersive spectroscopy (EDS) for elemental analysis. We can use the ZEISS Ultra Plus in a variety of scientific areas, including material and geological research. In life sciences, the Ultra Plus allows us to easily analyze samples with high throughput and receive large amounts of data. In addition, the Ultra Plus also offers the possibility of analysing natural biological samples with cryo-attachment and cathodoluminescence (CL) for minerals and material science samples.	5 days	Remote	01-02-2025 - 31-07-2025					
Universidad de Granada (UGR)	CIC	Sarah Bonilla-Correa (sbonilla@ugr.es)	Campus Universitario de Fuentenueva, Paseo Prof. Juan Ossorio, 18002, Granada, ES	Scout&Scan TM, Scout&Scan TM Control Systems Reconstructor, Dragonfly TM, Velox, Digital micrograph.	Titan G2 (TEM-AEM)	EM	High resolution transmission electron microscope, FEI (ThermoFischer Scientific) TITAN with 300 kV acceleration voltage. The Titan microscope is a image-aberration-corrected STEM/TEM with .07 nm resolution, equipped with a high-brightness Schottky-field emission e-source, and a high-resolution Gatan Imaging Filter (GIF). It has two 2048x2048 slow-scan CCD cameras. The high resolution STEM is equipped with HAADF detector and EDAX energy dispersive X-ray for AEM analyses. Includes different sample holder, one of them a tomography holder with ± 80 degrees to minimize the missing wedge in 3D reconstructions.	3 days	Remote or Physical	01-02-2025 - 31-07-2025					
					Xradia 510 Versa (µ-CT)	X-Ray	X-ray micro-CT ZEISS Xradia 510 Versa. This high resolution µ-CT is able to analyze non-destructively a whole range of sample types (solid and/or liquid) and geometries. Extending synchrotron-caliber performance, it achieves 0.7 µm true spatial resolution and voxel size of 70 nm. It has advanced absorption contrast along with innovative phase contrast. Multi-length scale capabilities enable to image the same sample across a wide range of magnifications, reducing dependence upon geometric magnification, thereby enabling to maintain submicron resolution down to 700 nm at large working distances. Additional capabilities: a) T-controlled stage; b) Mechanical testing device; c) Flow-through cylindrical stage.	3 days	Remote	01-02-2025 - 31-07-2025					
					AEM NX20 (AFM)	AFM	Atomic force microscope NX20 (Park Systems). This AFM allows working in contact, non-contact, lateral force microscopy (LFM), phase imaging and tapping AFM modes. It has a scan range of up to 100 µm. It has an open space for samples up to 150 mm x 150 mm, and thickness up to 20 mm. It has a universal liquid cell (open or closed) with liquid/gas perfusion with temperature control range up to +180° C (in air) or up to +150° C (within liquids). Since its acquisition, it has been offering service to in-house and international researchers studying morphological and chemical-physical properties of molecular nanostructures; dynamic processes, such as mineral dissolution and growth; protein aggregates, biofilms and colloids; nanolithography, electronic conductivity and mechanical properties of electronic circuits.	3 days	Remote or Physical	01-02-2025 - 31-07-2025					
Centre National de la Recherche Scientifique (CNRS)	INSU	Fabrice Barou (fabrice.barou@umontpellier.fr)	Place Eugene Bataillon, cc.060, 34095, Montpellier, FR	Aztec software, Channel 5, MTEX (https://mtext-toolbox.github.io)	X500FE CrystalProbe (FEG-SEM)	EM	FEG-SEM equipped with a Symmetry EBSD camera and EDS detector from Oxford Instruments. Inclined column allows the mapping of relatively large areas (few cm ²). Instruments & an EDS detector allowing simultaneous crystallographic and chemical mapping of thin sections or polished sections (up to 4x3 cm). The maximum resolution of crystallographic maps on geological materials is around 0.05 µm, and the acquisition frequency can reach 500 Hz.	5 days	Remote or Physical	25-02-2025 - 15-06-2025					
Universitetet i Oslo (UiO)	IKO-CT	Liebert Nogueira (l.p.nogueira@odont.uio.no)	Geitmyrsveien 49, 455, Oslo, NO	Bruker (CTAN, Dataviewer, CTvox, Nrecon), Dragonfly, Avizo 3D Pro - Availability via VDI Virtual Machine.	SkyScan Z211 (µ-CT)	X-Ray	The SkyScan Z211 Multiscale XCT. It requires small samples in order to reach submicron resolution (pixel size ~300 nm). The sample size should be around 1 mm in diameter and composed of low density materials. Resolution 900 nm in voxel. For high energies (70 kV > Energy > 160 kV), large samples can be scanned (up to 15 cm in diameter, and 20 cm high, depending on the composition of the sample. Pixel size can span from 8 µm to 50 µm	5 days	Remote or Physical	01-02-2025 - 31-07-2025					
					SkyScan 1172 (µ-CT)	X-Ray	The SkyScan 1172 microCT has an X-ray source of 30-100kV, 4-10 W, CCD detector 4kx4kx3k pixels. Pixel size: 0.9 µm to 25 µm; Resolution 3 µm in voxel can be reached, depending on the sample.	5 days	Remote or Physical	01-02-2025 - 31-07-2025					
Universitetet i Oslo (UiO)	GEO-SEM	Kristina Dunkle (kristina.dunkle@geo.uio.no)	Sem Sælands vei 1, 371, Oslo, NO	Bruker Esprit 2.6, CrossCourt4 Rapide (HR-EBSD), Odemis (CL).	SUS000 (FEG-SEM)	EM	Hitachi SUS000 FEG-SEM including low-vacuum mode. Dual Bruker Quantax XFlash 30 EDS system, Bruker e-Flash high resolution EBSD system with Argus, software CrossCourt4 Rapide for high-angular resolution EBSD (HR-EBSD), Delmic Sparc cathodoluminescence system with hyperspectral analysis.	3 days	Remote or Physical	01-02-2025 - 30-06-2025					
Universitetet i Oslo (UiO)	GEO-Nanoindenter	Luca Menegon (luca.menegon@geo.uio.no)	Sem Sælands vei 1, 371, Oslo, NO	Acquisition and processing software from the manufacturer (InView software). Data can be exported and processed with Microsoft Excel and Matlab.	G200X Nano Indenter	EM	The nano-indenter located in the Friction Lab of the Department of Geosciences, UO, is a G200X instrument that quickly delivers accurate, quantitative results of nano-mechanical testing of materials. It can be used for hardness, modulus, fracture toughness, and other property measurements, high-speed material property maps, as well as for creep tests. The instrument was purchased in 2021 and is equipped with two actuators that can be used to apply force up to 500 mN and in continuous stiffness mode (CSM).	3 days	Remote or Physical	01-02-2025 - 30-06-2025					

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EXCITE partner	Facility name	Facility contact	Facility address	Data acquisition and processing software	Available equipment	Equipment type	Equipment short description	Sample preparation offered?	Max access per proposal	Access mode	Equipment availability
University of Porto (FCUP)	FCUP	Alexandra Guedes (aguedes@fc.up.pt)	Rua do Campo Alegre N° 687, 4169-007, Porto, PT	Labspec; Particle finder; CalRam.	FEI Quanta 400 (FEG-SEM)	EM	The equipment can be run at high vacuum, low vacuum, or environmental mode, allowing imaging and chemical analysis of samples with or without a conductive coat. Moreover, the facility also hosts a SEM equipped with a cryogenic system.	Yes. Samples for SEM-EDS will be coated (carbon or Au-Pd) at the facility.	5 days	Physical	01-02-2025 - 31-07-2025
					Invia Qontor Spectrometer (Raman)	Raman	The InVia® Qontor includes an automated piezoelectricstage, enabling 2D-Raman imaging and depth measurements (lateral and vertical resolution: 100 and 15 nm). The spectrometer is coupled to a Linkam Stage (80 – 1500 K), a closed-cycle He cryostat (10– 300K), and a continuous flow He cryostat with superconducting coil to applied external magnetic field (up to 7T; down to 3K). A high-pressure diamond anvil cell (up to 100 GPa) and high temperature (300 – 1000K) is also available for measurements.		5 days	Physical	01-02-2025 - 31-07-2025
					Raman microscope LabRAM (Raman)	Raman	Equipment calibrated to quantify volatiles such as CO ₂ , CH ₄ and N ₂ in fluid inclusions. The equipment can be coupled to a Linkam heating-freezing stage.		5 days	Physical	01-02-2025 - 31-07-2025
					Raman microscope Xplora (Raman)	Raman	The equipment offers a complete range of imaging technologies that enable acquiring Raman data from minute traces of material easily producing detailed chemical images and highly specific data from discrete points, lines, areas, and even volumes. With the possibility of using different excitation lasers (785, 532 nm) and three diffraction gratings (2400, 1800 and 1200lines/mm) they enable spectral resolution better than 2 cm ⁻¹ .		5 days	Physical	01-02-2025 - 31-07-2025
University of Cambridge (UCAM)	ESM&DS	Iris Buisman (ib330@cam.ac.uk)	Downing Street, CB2 3EQ, Cambridge, Cambridge	ThermoFisher Maps (SE/BSE/CL imaging); AzTec (EDS, EBSD), MatLab-MTEX (EDS, EBSD); Jeol FEG EPMA - Jeol software and Probe for EPMA software.	Quanta 650F (FEG-SEM)	EM	Quanta FEG650 with sample stages for twelve thin sections or fourteen 25mm resin blocks, or large samples. It can operate in high vacuum, low vacuum or environmental mode. SE/BSE/Cathodoluminescence imaging/tiling. Spot Analysis/Mapping/Tiling with EDS; Oxford UltimMax 170mm. Phase identification through Oxford software AzTec. Mapping with EBSD: Oxford Symmetry 3. EBSD full stage mapping available. Typically used to explore phase id, grain size and morphology distributions, grain orientation, texture, and strain deformation at 100nm to cm scale.	No. Samples must be prepared by the user according to the facility specifications.	5 days	Remote or Physical	01-02-2025 - 31-07-2025
					JXA-HP200F (FEG-EPMA)	EM	Jeol JXA-HP200F fitted with 5 WDS spectrometers, 1 Jeol EDS, 1 PanCL and Transmitted/Reflected Optical microscope. Cold finger and plasma cleaner available. EDS/WDS combined accurate analysis. Stage mapping allows for large areas analysis (up to 90mm ²). Thin sections (28mm x 50mm x 1.5mm) and round stubs (both 25.5mm and 30mm diameter) are suitable. The FEG source allows for trace element analysis with large probe currents (1nA to 10microA) and high-resolution imaging in conjunction with very high magnification, small area chemical analysis allowing for particles		5 days	Remote or Physical	01-02-2025 - 31-07-2025
	WEUS	John Walmsley (jcw80@cam.ac.uk)	27 Charles Babbage Road, CB3 0FS, Cambridge, GB	Access to proprietary manufacturers software, including Velox, TIA, INCA/Aztec, Digital Micrograph, Atlas, licenced software such as Avizo, Dragonfly. Use of open-source software such as Hyperspy and Sigma are emphasised.	Tecnai F20 G2 X-Twin (FEG-TEM)	EM	TEM, STEM and imaging, Scanning Electron Diffraction (SED) with precession (Nanomegas) and electron tomography. In situ-studies are enabled by Gatan OneView camera combined with heating (DENS Wildfire) and liquid (Protochips Poseidon) holders.		10 days	Remote or Physical	01-02-2025 - 31-07-2025
					Tecnai Osiris 80-200 (STEM)	EM	TEM imaging and fast chemical mapping in scanning transmission electron microscope (STEM). Its primary beam energy is 200keV, with a lower energy of 80 keV for materials sensitive to knock-on damage. FEI Super-X system provides high collection (>0.9 sr solid angle) and high count rates (>250 kcps) EDS analysis. Electron Energy Loss Spectroscopy (EELS) using Gatan's Enfimion ER 977 spectrometer allows Scan Module for Dual EELS (sequential low-loss and high-loss spectrum acquisition) and RangeEELS.		10 days	Remote or Physical	01-02-2025 - 31-07-2025
					Spectra 300 (STEM)	EM	Aberration Corrected atomic resolution, monochromated, Scanning Transmission Electron Microscope. The instrument offers EDS (Thermo Fisher Super-X) and high energy resolution EELS analysis (Gatan Continuum 1066). Magnetic imaging, Lorenz magnetic imaging, electron holography Scanning Electron Diffraction (SED) (including Quantum Detectors Merlin direct detection camera). The primary Aberration Corrected atomic resolution, monochromated, Scanning Transmission Electron Microscopy (STEM). The instrument offers EDS (Thermo Fisher Super-X) and high energy resolution EELS analysis (Gatan Continuum 1066, 0.15 eV or better). A rotatable Mollenstedt-Ducker biprism allows for off-axis holography and a Lorentz lens allows field-free imaging of magnetic specimens. Scanning Electron Diffraction (SED) with precession (Nanomegas) capability includes a Quantum Detectors Merlin direct detection camera. The primary beam energy is 300 kV and the system is also aligned at 80 kV and 40 kV.		10 days	Remote or Physical	01-02-2025 - 31-07-2025
					Helios Nanolab (FIB-SEM)	EM	Dual beam Focused Ion Beam (FIB) Scanning Electron Microscope (SEM) instrument SEM/FIB, TEM lamella sample preparation (OrmiProbe), Pt, Teos, and Carbon Deposition. FIB/SEM tomography, EDS and Electron Backscattered Diffraction analysis are provided, with Oxford Instruments detectors.		10 days	Remote or Physical	01-02-2025 - 31-07-2025
					CrossBeam 540 (FIB-SEM)	EM	Dual beam Focused Ion Beam (FIB) Scanning Electron Microscope (SEM) instrument SEM/FIB, Pt, Teos, and Carbon Deposition. FIB/SEM tomography.		10 days	Remote or Physical	01-02-2025 - 31-07-2025
Gemini 300 (SEM)	EM	SEM with Oxford Instruments X-Max and Symmetry EDS and EBSD detector systems with Aztec software.	10 days	Remote or Physical	01-02-2025 - 31-07-2025						
Technische Universität Bergakademie Freiberg (TUBAF)	TUBAF-CT	Ralf Ditscherlein (ralf.ditscherlein@mvtat.tu-freiberg.de)	Agricolastraße 1, 09599, Freiberg, DE	VGStudioMax, Dragonfly, Ilastik.	Xradia 510 Versa (µ-CT)	X-Ray	High-resolution 3D X-ray microscope (XRMI) designed for non-destructive in-situ analysis (1) load cell, Deben, CTS000, (2) in-situ flow cell, self-developed, 2 sizes). Sample sizes up to 300 mm, supporting weights up to 15 kg. Up to 0.7 µm true spatial resolution, with a minimum reasonable voxel size of approx. 0.4 µm. Key specifications: X-ray source: 30-160 keV, maximum power 10 W, 12 filters for energy selection (artefact reduction + contrast enhancement), 2k x 2k pixel detector. Two-stage magnification (0.4x macro / 4x, 20x, 40x) for multi-scale zoom-in tomography.	Yes. We offer a guided sample preparation of particulate samples. Also assistance in fixing complex geometries supported by 3D printing (please register early enough if required).	unspecified hours	Remote or Physical	01-02-2025 - 31-07-2025
Université de Pau et des Pays de l'Adour (UPPA)	DMEX	Pascale Senechal (pascale.senechal@univ-pau.fr)	Avenue de l'Université, BP 1155, 64013, Pau, FR	CPU/GPU image processing server available on site. Several software packages for image analysis ORS Dragonfly, Fiji) and data processing (Matlab, Python) are available.	Xradia 510 Versa (µ-CT)	X-Ray	The Zeiss Xradia Versa 510 targets sub-micron imaging. It offers voxel sizes ranging between ~250nm and ~40µm (unbinned data) on respectively millimeter to centimeter-sized samples. The system is equipped with a 4Mpx CCD detector. An in-situ stage enables to perform in situ analyses. Test cell to be provided by the user.	5 days	Remote or Physical	01-02-2025 - 31-07-2025	
					UniTOM XL (µ-CT)	X-Ray	The Tescan UniTOM XL Spectral is a versatile system. It can handle a wide range of sample sizes (up to a meter in length) and can flexibly trade-off spatial and temporal resolution thanks to a 300W source and an 8Mpx flat panel detector. An in-situ stage enables in situ/in operando experiments. Test cell to be provided by the user. The system also features a spectral line detector with up to 128 channels enabling non-destructive 3D chemical differentiation.	5 days	Remote or Physical	01-02-2025 - 31-07-2025	
					DynaTOM (µ-CT)	X-Ray	The Tescan DynaTOM targets dynamic tests or the analysis of non-consolidated samples. The system is equipped with a 3Mpx flat panel detector and an X-ray source, mounted onto a horizontal gantry. The samples remain static during the analysis. The system offers voxel sizes ranging between ~1 and 150µm (unbinned data) on millimeter to decimeter-sized samples. Designed to perform in situ/in operando analyses. Test cell to be provided by the user.	5 days	Remote or Physical	01-02-2025 - 31-07-2025	
Istituto Nazionale di Geofisica e Vulcanologia (INGV)	INGV-BM1	Fabrizio Di Fiore (fabrizio.difiore@ingv.it)	Via di Vigna Murata 605, 143, Roma, IT	Jeol and Thermo Scientific SPI softwares.	Scios 2 LV (FIB-SEM)	EM	The Electron Microscopy Laboratory is equipped with a Scios 2 LV (FIB-SEM). The Scios 2 LV is an ultra-high-resolution analytical focused ion beam scanning electron microscopy (FIB-SEM) system that provides outstanding sample preparation and 3D characterization performance for a wide range of samples, including magnetic and non-conductive materials. Moreover, the Large Area Map software allows the acquisition of large sample areas at high magnification by means of a collage of images. Specifications: - Resolution: 1.5nm - Accelerating voltage: 0.2-30 kV - Maximum probe current: 400 nA - Magnification: from 40x (WD 10 mm) to 500.000x - Specimen stage: five axis drive eucentric goniometer stage - Maximum specimen size: 50 mm x 40 mm.	No. Thin sections or stubs need to be provided by the user according to our specifications; these samples could be carbon coated at our facility.	10 days	Physical	01-02-2025 - 31-07-2025
					JEOL JXA-SP100 (EPMA)	EM	The Electron Microprobe Laboratory is equipped with JEOL JXA-SP100 electron microprobe, with five wavelength dispersive spectrometers (12 crystals), an energy dispersive spectrometer and transmission illuminator. The instrument is designed to measure qualitatively composition of a solid polished material on a microscale with high precision (within one percent relative for major constituents) and low detection limits (commonly a few tens to few hundreds ppm). Sample of interest can be as small as a few microns across. Built on the base of scanning electron microscope it has all the capabilities of SEM too. Specifications: - Accelerating voltage: 10-30 kV - Probe current: 5-1000 nA - Samples type: thin sections and one-inch epoxy-samples.		10 days	Physical	01-02-2025 - 31-07-2025
Istituto Nazionale di Geofisica e Vulcanologia (INGV)	INGV-OV	Lucia Pappalardo, Gianmarco Buono (microct.ov@ingv.it)	Via Diocleziano 328, 80125, Napoli, IT	Zeiss Scout & Scan and Zeiss XRM reconstructor; image processing and simulators (Avizo/PerGeos, Dragonfly/ORS.	Xradia 410 Versa (µ-CT)	X-Ray	Micro-CT system Zeiss Xradia 410 Versa) equipped with a microfocus X-ray source capable of energies from 40 to 150 kV. Detectors with magnifications ranging from 0.4X to 20X (resolution down to 0.9 µm), imaging mode in absorption and phase contrast. Device to perform high temperature-high pressure in-situ experiments and time-resolved (4D) imaging.	Yes. To be discussed with facility.	5 days	Remote or Physical	01-02-2025 - 31-07-2025
Technische Universität Delft (TU Delft)	CTIG	Ellen Meijvogel-de Koning (p.m.meijvogel-dekoning@tudelft.nl)	Stevinweg 1, Gebouw Z3, 2628 CN, Delft, NL	Phoenix reconstruction software, Avizo 3D analyses software, Panthera reconstruction software, Dragonfly 3D analyses software Matlab/Python routines, Image J.	Samatome Volume Zoom (macro-CT)	X-Ray	Lab-scale computed tomography scanner to image large samples focused on in-situ testing and imaging of materials. Rocks/Samples with diameters of 15 cm and length of over a meter can be scanned in tens of seconds at a resolution of at minimum 500 micrometer.	Yes. Coring options available for all sizes of samples from large blocks. Precision polishing also possible.	5 days	Remote or Physical	01-02-2025 - 31-07-2025
					CoreTOM (µ-CT)	X-Ray	Lab-scale micro computed tomography scanner to characterize microstructures of a wide variation of materials and sample dimensions. Samples with diameters of 1 mm to up to 12 cm can be scanned at with a maximum of 3 micrometer resolution. Large samples (>30 cm in length) can be scanned and the equipment has the capability to perform dynamic imaging.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
Norges Tekniskaturvitenskapelige Universitet (NTNU)	NEXT-NTNU	Basab Chattopadhyay (basab.chattopadhyay@ntnu.no)	Realfagbygget DS-170, Høgskoleringen 5, 7491, Trondheim, NO	Nikon Inspect-X and CT Pro, VGStudio Max, open-source image processing software.	HT22S (µ-CT)	X-Ray	Nikon XT H 225 ST, 225kV UltraFocus reflection target (Mo, W, Ag, Cu) and 180 kV transmission target, Perkin Elmer 1620 flat panel detector, 300 µm to 10 µm resolution - depending on the sample size, max sample size 30 cm/50 kg.	No. Samples must be prepared by the user according to the facility specifications.	10 days	Remote or Physical	01-02-2025 - 31-07-2025
					Custom-built: X-radiography (µ-CT)	X-Ray	Custom-built setup, VISOON XT9100 microfocus source (Mo, Ag or Cu), Vosskuhler CCD-camera, SCINT-X pixelated scintillator - optimized for 17 keV radiation, 4-µm spatial resolution with frame rates up to 6 per second.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
RWTH Aachen University (RWTH)	4D X-ray tomography imaging	Florian Fusseis (florian.fusseis@rwth-aachen.de)	Lochnerstr. 4-20, 52064, Aachen, Germany	Dragonfly, ImageJ/Fiji, SPAM.	Operando 4D X-ray imaging	X-Ray 4D	Users will have access to several x-ray transparent experimental setups (Sleipnir, Mjöllnir, Heit Mjöllnir) that can either be used as they are or, within our possibilities, be adapted to experiments. The equipment we will share includes the latest flagship triaxial rig Heit Mjöllnir, which can reproduce most subsurface reservoir conditions up to 300 °C/30 MPa Pc/30 MPa Pf to study fluid-rock interaction and deformation processes in 10x20 mm large samples with µm resolution. A bespoke copy of that rig is currently being finalised, funded by UK's NERC. Depending on the experiment and equipment used, we will support users in applying for beamtime at one of the following synchrotrons: DIAMOND (UK), SOLEIL (France), ESRF (France) or, once their upgrades are finished, SLS (CH). Users will be accompanied through all stages of conducting a successful 4D Xray tomography experiment, including experiment planning, equipment adaptation, beamtime acquisition, experimental dry runs, synchrotron µCT, data processing and analysis.	Yes Samples can be prepared for experiments at either UEDIN or RWTH.	Depending on research project, about 10-14 days	Research will have both, physical and remote components.	01-02-2025 - 31-07-2025
CEITEC	CTLab	Eva Zikmundova (excite2@ceitec.vut.cz)	Purkytova 123, 61200, Brno, CZ	Volume Graphics, Avizo, GOM Inspect.	Phoenix vxtomelix L240 (µ/n-CT)	X-Ray	Versatile CT system with a walk-in protection cabinet equipped with X-ray micro- and nano-focus sources and a large 4k detector, 7 axes on massive granite base and air-condition. Suitable system for large scale samples, porosity analysis of small pieces of rocks, and in-situ experiments. The in-situ box (CactuX s.r.o) allowing for the simulation of real-life conditions during the CT analysis, offering temperature control (-30 °C to +60 °C), a charging/discharging function to investigate batteries (up to 30 A) and a power supply function (up to 30 A/60 V) with the sample area of 35 mm x 65 mm is also available.	No. Samples must be prepared by the user according to the facility specifications.	5 days	Remote or Physical	01-02-2025 - 31-07-2025
					Phoenix vxtomelix M300 (µ/n-CT)	X-Ray	Industrial CT with a powerful microfocus tube, air-bearings, fixed detector-source distance for better metrological performance. Excellent device for structural analysis of high-dense samples including various forms of metals.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
					Rigaku nano3DX (n-CT)	X-Ray	Nano CT system characterized by high-resolution, dual-target source, quasi-parallel beam, phase contrast imaging. Very useful for light material samples like plants, polymeric composites, textile, fibers.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
	Heliscan MicroCT (µ-CT)	X-Ray	High-quality data CT using special helical trajectory, wide cone beam, iterative reconstruction algorithm. Perfect machine for cylindrical shaped samples like drill cores and battery cells.	5 days	Remote or Physical	01-02-2025 - 31-07-2025					
	LIBSLab	Eva Zikmundova (excite2@ceitec.vut.cz)	Purkytova 123, 61200, Brno, CZ	In-house software.	LIBS Firefly (LIBS)	LIBS	LIBS setup for solid samples, chemical imaging and depth profiling, LOD 1-100 ppm, spatial resolution 10-150 µm, scanning area 100x100 mm2, wide range of elements (including Li, Be, Na, Mg, N, Cl). Laser pulse energy up to 50 mJ, laser wavelengths (266, 532, 1064 nm), scanning rate 50 Hz. Spectral range covering 240-800 nm.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
					LIBS Discovery (LIBS)	LIBS	LIBS setup for solid samples, chemical imaging and depth profiling, LOD 1-100 ppm, spatial resolution 10-150 µm, scanning area 100x100 mm2, wide range of elements (including Li, Be, Na, Mg, N, Cl). Laser pulse energy up to 50 mJ, laser wavelengths (266, 532, 1064 nm), scanning rate 50 Hz. Spectral range covering 180-1000 nm. LIBS setup including LIBS Interaction Chamber, capability to simulate atmospheric conditions of celestial bodies, e.g., Mars; CO2 at 10 mbar, and even the Moon.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
Curtin University	CurtinGAP	Denis Fougereuse (geosciatprobe@gmail.com)	Kent Street, 6102, Perth, AU	Data Acquisition and Processing will utilise Cameca's AP Suite software and is available as part of the standard workflow.	LEAP 4000X HR Atom Probe Microscope (APM)	APM	Local Electrode Atom Probe with reflectron ion flight path. Voltage and UV laser pulsing modes.	Yes. Atom probe tomography is undertaken on small, needle-shaped specimens. These specimens are prepared at Curtin University using site-specific targeting in the FIB-SEM. Atom probe specimens are typically taken from flat petrographic thin sections or polished blocks. We do not manufacture thin sections or polished blocks within the facility and users must provide these.	10 days	Remote or Physical	01-02-2025 - 31-07-2025
					Lyra (FIB-SEM)	EM	TESCAN Lyra3 Ga+ focused ion beam SEM (FIB-SEM). MIRA Electron column (Field Emission). Cobra Ion column (monoisotopic 69Ga+). MonoGIS with Pt reservoir. SmarAct Nanomanipulator. ToFwork ToF-SIMS. Oxford EDS detector. Oxford EBSD detector.		5 days	Remote or Physical	01-02-2025 - 31-07-2025
University of Pannonia	Nanolab	Mihály Pósfai (mihaly.posfai@gmail.com)	Egyetem 10., 8200, Veszprém, HU	TEM data processing is performed using Velox, Inspect 3D and Avizo software, plus crystallography software (CrystalMaker, CrystalDiffra, SingleCrystal) is available.	Talos F200X (STEM)	EM	200 kV (STEM). High-brightness X-FEG electron gun, high-resolution imaging, electron diffraction, electron tomography, and high-sensitivity 2D EDX chemical mapping (Super-X).	Yes. For efficiency and time management we prefer that TNA users bring their specimens ready for TEM. Nevertheless, we can do basic TEM sample preparation in Nanolab: grid samples, ultramicrotomy, carbon coating of specimens. FIB milling may be arranged elsewhere, subject to availability and timing.	4 days	Remote or Physical	01-02-2025 - 31-07-2025