

INSTITUTE	FACILITY				EQUIPMENT						
	EXCITE Partner	Facility manager	Facility address	Processing and acquisition software available at facility	Facility name	Available equipment	Method (EM or X-ray)	Equipment description	Maximum units of access per proposal	Unit of access	Mode of access
1-UNIVERSITEIT UTRECHT (UU)	Markus Ohl m.ohl@uu.nl	Yolelaan 1, 3584 CL Utrecht	Avizo, Aztec, Esprit, Zen, Atlas, Velox, GMS3, STEMx, Donovan, Zeiss Reconstructor	UU - EM Centre	Thermo Fisher Helios Nanolab 3G (FIB-SEM)	EM	FIB-SEM with Cryostage, Nordlys EBSD, Oxford xxx EDS, Gatan CL,	-	day	Remote	
					Thermo Fisher Talos F200X (STEM)	EM	200 kV (S)TEM. 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)	-	day	Remote	
					Zeiss Gemini 450 (SEM)	EM	High-end SEM with low vacuum capabilities. Symmetry EBSD detector, Oxford xxx EDS, Delmic CL, Quorum Cryostage	-	day	Remote and/or physical	
					Zeiss Evo 15 (SEM)	EM	Environmental SEM with Peltier cooling stage, 2x Bruker EDS and automated mineralogy	-	day	Remote and/or physical	
					JEOL JXA-8530F Hyperprobe (EMP)	EM	Field Emission Electron probe microanalyser, equipped with 5 WDS spectrometers, SDD ED system, CL system (panchromatic imaging and xCLent hyperspectral CL)	-	day	Remote	
					Zeiss 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.	-	day	Remote and/or physical	
2-UNIVERSITEIT GENT (Ugent)	Laurenz Schröer Laurenz.Schroer@UGent.be	Proeftuinstraat 86, 9000 Gent	Octopus, VGStudioMax, Avizo, Dragonfly	UGent - UGCT	Nanowood (n-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 0.4 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 7 ² µm ² is complemented with a large-area Varian flat-panel detector.	10	day	Remote	
					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 PerkinElmer 1620 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 2048x2048 pixels. Two additional piezo stages allow for an exact positioning of the sample on the rotation axis.	10	day	Remote	
					Medusa (n-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 14m, 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	day	Remote and/or physical	
					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 5 full rotations per minute.	15	day	Physical	
					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	day	Remote and/or physical	
					TESCAN 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	day	Remote and/or physical	
					µ-CT add-on modules for direct observations of fluid flow and weathering experiments	X-ray	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).	15	day	Physical	
3-HELMHOLTZ-ZENTRUM DRESDENROSSENDORF EV (HZDR)	Jose Godinho j.godinho@hzdr.de	40, Chemnitz Strasse, 09599, Freiberg, Germany	Avizo, Dragonfly, Panthera	HZDR - HIF - Spectral-CT	Core-Tom (tescan), with spectral detector	X-ray	Core-Tom (tescan), Resolution >5µm, Sample sizes < 15 cm diameter and < 90 cm high. Possibility to measure k-edge of elements inside sample. Possibility of in-situ / time-lapse studies that require large rigs.	15	day	Physical	
4-HELMHOLTZ ZENTRUM POTSDAM DEUTSCHESGEOFORSCHUNGSZENTRUM (GFZ)	Vladimir Roddatis roddatis@gfz-potsdam.de	Telegrafenberg, D-14473 Potsdam	Velox, TIA, Digital Micrograph, Tomography, Nanomegas, Avizo, GSTEM, Dr. Probe, TEAM, TSL OIM, Slice&View	GFZ - PISA	Themis Z (FEG-STEM)	EM	Thermo Fisher Scientific Themis Z (31); 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, EFTEM); TEM, STEM and EDX Tomography Data Acquisition Software; Low-dose Exposure Technique; Precession electron diffraction	2	day	Remote and/or physical	
					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 Tridlem (EELS, EFTEM); 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		day	Remote and/or physical	
					FEI Quanta 3D FEG	EM	A FEI 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.		day	Remote and/or physical	
					FEI Helios G4(FIB-SEM)	EM	FEI 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 (ICD). 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 65 nA, accelerating voltage range: 500 V to 30 kV. Elstar in-lens SE/BSE detector; Everhart-Thornley SE detector (ETD); Retractable STEM3+ detector with BF/DF/HAADF segments; Gas Injection System; Easylift for precise in situ sample manipulation; AutoTEM wizard automated sample preparation		day	Remote and/or physical	
5-UNIVERSIDAD DE GRANADA (UGR)	Encarnación Ruiz Agudo encaruiz@ugr.es	Campus Universitario de Fuentenueva, Paseo Prof. Juan Ossorio, s/n, 18003 Granada (SPAIN)	Scout&Scan TM, Scout&Scan TM Control Systems Reconstructor, Dragonfly TM, Velox, Digital micrograph	UGR - CIC - X-ray µ-CT	ZEISS Xradia 510 Versa (X-Ray µ-CT)	X-ray	X-ray micro-CT ZEISS Xradia 510 Versa. This high resolution µ-CT is able to analyse 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	day	Remote	01/08/22 to 31/08/22
					UGR - CIC - HRTEM	FEI TITAN (sub-nm resolution TEM, equipped for AEM analyses)	EM	High resolution transmission electron microscope, FEI 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	day	Remote
6-CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)	Fabrice Barou fabrice.barou@umontpellier.fr	Geosciences Montpellier, cc.060, Univ. Montpellier, Pl. Eugene Bataillon, 34095 Montpellier cedex5, France	Aztec software, MTEX, Channel 5	CNRS-INSU - CrystalProbe-Montpellier	CrystalProbe FE-X500 (FEG-SEM with EDS detector and EBSD camera)	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	day	Remote and/or physical	
7-UNIVERSITETET I OSLO (UIO)	Liebert Nogueira l.p.nogueira@odont.uio.no	Department of Geosciences, University of Oslo, Sem Sæviands vei 1, 0371 Oslo, Norway	Bruker Esprit 2.3; CrossCourt4 Rapide (HR-EBSD); Odemis (CL)	UIO - IKO - MicroCT	microCT Skyscan 1172	X-ray	microCT Skyscan 1172, resolution 2 µm in voxel	4	day	Remote and/or physical	
					UIO - IKO - NanoCT	nanoCT SkyScan 2211	X-ray	nanoCT SkyScan 2211, resolution 300 nm in voxel	4	day	Remote and/or physical
	Siri Simonsen siri.simonsen@geo.uio.no			UIO - GEO - SEM	FEG-SEM with dual EDS, high-resolution EBSD and cathodoluminescence (CL) system with spectral analysis, HR-EBSD	EM	Hitachi SU5000 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 spectral analysis. Sample prep facilities: carbon coater Cressington 208C, vibratory polishing machine QPol Vibro (for EBSD samples).	3	day	Remote and/or physical	01/07/22 to 31/07/22

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EXCITE Partner	Facility manager	Facility address	Processing and acquisition software available at facility	Facility name	Available equipment	Method (EM or X-ray)	Equipment description	Maximum units of access per proposal	Unit of access	Mode of access	Period when equipment is NOT available	
8-UNIVERSIDADE DA BEIRA INTERIOR (UBI)*	Mário Gonçalves mgoncalves@ciencias.ulisboa.pt	Faculdade de Ciências da Universidade de Lisboa, Edifício C6, Piso 1, Campo Grande, 1749-016 Lisboa, Portugal	Standard "Jeol" for WDS spectrometers and standard "Oxford Analytics Processing and acquisition software"	UBI - FCUL - EPMA lab	JEOL JXA-8200 electron probe micro-analyzer (EDS, 4 WDS spectrometers)	EM	JEOL proprietary software (SunOS 9); Accelerating voltage: 0.2 to 30 kV (0.1 steps); Electron probe current range: 10 ⁻¹² to 10 ⁻⁵ A; Electron probe current stability: ± 0.5 X 10 ⁻³ /hr ± 0.3X10 ⁻³ /24hr; Spectrometers: WDS (4): TAP, PETJ, PETH, LIF, LIFH, LDE1; EDS: Oxford Instruments Model X-act; Resolution at 5.9 keV: 129 eV; Energy range (keV) 20; Strobe resolution (eV) 42.26; Secondary-electron (SE) and backscattered-electron (BSE) imaging: SE image resolution: 6 nm; BSE image modes: composition and topography; Scanning image magnification: 40X to 300,000X; Sample Specifications: Maximum size: 100 x 100 x 50 mm; Maximum analyzable area: 90 x 90 mm	72	hour	Remote and/or physical	01/08/2022 to 31/08/2022	
	Fernanda Guimarães fernanda.guimaraes@ineg.pt	Rua da Amieira, S. Mamede de Infesta		UBI - LNEG - EPMA	JEOL JXA-8500F electron probe micro-analyzer (EDS, 5 WDS spectrometers)	EM	The EPMA is a Jeol JXA-8500F-Field Emission Electron Microprobe, equipped with 4 WDS spectrometers and 1 EDS spectrometer. It is mainly used to do quantitative analysis either at certain points or areas of the sample. Before arriving to the Lab, samples (round blocks or thin sections) must be previously polished with diamond paste (until ¼ µm). Besides quantitative analysis it is possible to obtain Secondary Electron Images and Electron Backscattered Images for phase contrast and Element Line profiles and Element Phase maps. Resolution is dependent on the type of sample but it can vary from some hundreds of nm to a couple of µm.		hour	Remote and/or physical		
9-THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UCAM)	John Walmsley jcw80@cam.ac.uk	Department of Materials Science & Metallurgy University of Cambridge 27 Charles Babbage Road Cambridge CB3 0FS	INCA/AZtec, Atlas, Avizo and open-source software such as Hyperspy	CAM - WEMS	FEI Tecnai F20 FEGTEM	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 (Protophase Poseidon) holders.		day	Remote and/or physical		
				FEI Tecnai Osiris 80-200	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. FEIs 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 Enfinium ER 977 spectrometer allows Scan Module for Dual EELS (sequential low-loss and high-loss spectrum acquisition) and RangeEELS.		day	Remote and/or physical			
				FEI Titan3 80-300	EM	Aberration corrected, monochromated, atomic resolution Scanning Transmission Electron Microscopy (STEM). Conventional TEM imaging modes are accommodated with two 2k CCD cameras: one in the Gatan Tridiem spectrometer/imaging filter for energy-filtered TEM (EFTM). A rotatable Mollenstedt-Ducker biprism allows for off-axis holography and a Lorentz lens allows field-free imaging of magnetic specimens.		day	Remote and/or physical			
				TF Spectra 300	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.		day	Remote and/or physical			
	David Wallis dw584@cam.ac.uk	Department of Earth Sciences, Downing St, CB2 3EQ, Cambridge (UK)	ThermoFisher Maps (SE/BSE/CL imaging); ThermoFisher iMeasures, iDiscover, NanoMin (EDS + BSE); Bruker Esprit, MatLab-MTEX (EDS, EBSD); Jeol FEG EPMA - Jeol software and Probe software.	CAM - ES M-DS - FEG Electron MicroProbe	Field-emission gun electron probe microanalysis (FEG-EPMA)	EM	Newly installed (Oct 2021) Jeol JXA-IHP200F is 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 80mm ²). Thin sections (1mm 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 <100nm to be chemically mapped.	3	day	Remote and/or physical	10/10/2022 to 31/10/2022	
			CAM - ES M-DS - SEM QEMSCAN	FEI QEMSCAN 650F (FEG-SEM) with electron backscattered diffraction (EBSD) and cathodoluminescence (CL)	EM	QuantaFEG450 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: 2 x Bruker XFlash 630. Quantitative Evaluation of Minerals by Scanning electron microscopy (QEMSCAN); this EDS based method aids in phase mapping, modal proportion and particle and mineral grain size and shape among other things using the iDiscover software package. Mapping with EBSD: Bruker e-FlashHR. Typically used to explore phase id, grain size and morphology distributions, grain orientation, texture, and strain deformation at 100nm to cm scale.	3	day	Remote and/or physical	10/10/2022 to 31/10/2022		
11-UNIVERSITE DE PAU ET DES PAYS DE L'ADOUR (UPPA)	Pascale Senechal pascale.senechal@univ-pau.fr	UPPA-DMEX, Avenue de l'univerité, BP 1155, 64013 Pau, France	ORS Dragonfly and open source software such as Fiji	UPPA - DMEX - High resolution tomography	ZEISS Xradia Versa 510 (X-ray µ-CT), with possibility of in situ analyses (controlled pressure and temperature conditions)	X-ray	The Zeiss Xradia Versa 510 offers voxel sizes ranging between ~250nm and ~40µm (unbinned data) on millimeter to centimeter-sized samples. The system is equipped with a 4Mpx CCD detector. An in-situ stage enables 4D experiments.	NA	hour	Remote and/or physical	30/07/2022 to 20/08/2022	
				UPPA - DMEX - High speed tomography	tescan UnitQM XL (X-ray µ-CT), with possibility of in situ analyses (controlled pressure and temperature conditions) and chemical mapping	X-ray	The Tescan UnitQM XL offers voxel sizes ranging between ~1 and 150µm (unbinned data) on centimeter to decimeter-sized samples. The system is equipped with two detectors, an 8Mpx flat panel detector and a spectral line detector with up to 128 channels. An in-situ stage enables 4D experiments.	NA	hour	Remote and/or physical	30/07/2022 to 20/08/2022	
12-ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA (INGV)	Lucia Pappalardo lucia.pappalardo@ingv.it	Via Diocleziana 328, 80125, Napoli	Zeiss Scout & Scan and Zeiss XRM reconstructor; image processing and simulators (Avizo/PerGeos, Dragonfly/ORS, ImageJ/Fiji, Python libraries, Pore3D, Blob3D, 3DViewer)	INGV-OV - X-ray MicroCT	Xradia 410 Versa 3D (X-Ray 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.	5 days but longer periods can be evaluated	day	Remote and/or physical		
				Manuela Nazzari manuela.nazzari@ingv.it	Via di Vigna Murata 605, 00143, Roma	Jeol and Oxford Aztec software	INGV-RM1 - FESEM/EMPA	JEOL JSM-6500F (FEG-SEM)	EM	The Electron Microscopy Laboratory is equipped with a JEOL JSM-6500F Field Emission Scanning microscopy. The JSM-6500F is a high performance analytical FESEM integrating Oxford AztecLive Ultim Max 40 energy dispersive X-ray analyzer for live electron images and live X-ray chemical imaging. 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: 0.5-30 KV • Maximum probe current: 200 nA • Magnification: from 40x (WD10 mm) to 500,000x • Specimen stage: five axis drive eucentric goniometer stage • Maximum specimen size: 50 mm x 40 mm	5	day
					JEOL JXA-8200 (EPMA- 5 WDS spectrometers, EDS detector)	EM	The Electron Microprobe Laboratory is equipped with JEOL JXA-8200 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: • Minimum probe dimension: 2.5nm • Accelerating voltage: 15-30 KV • Probe current: 5-200 nA • Samples type: thin sections and one-inch epoxy-samples	5	day	Physical		
13-TECHNISCHE UNIVERSITEIT DELFT (TU Delft)	Prof Pacelli Zitha p.l.zitha@tudelft.nl	Department of Geoscience and Engineering, Stevinweg 1, 2628CN Delft, The Netherlands	Phoenix reconstruction software, Avizo 3D analyses software, Matlab/Python routines	TU Delft - CITG - Medical(Macro)-CT scanner	Siemens macro-CT scanner (scanning of dm-sized sample at mm-scale resolution)	X-ray	Lab-scale computed tomography scanner to image large samples focused on in-situ testing and imaging of materials. RocksSamples 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.	4	day	Remote and/or physical		
				TU Delft - CITG - Micro-CT scanner	Phoenix Nanotom µ-CT scanner	X-ray	Lab-scale micro computed tomography scanner to characterize microstructures of a wide variation of materials. Samples with diameters of 1 mm to up to 5 cm can be scanned at a resolution of at minimum 1 micrometer.	9	day	Remote and/or physical		
14-NORGES TEKNISKNATURVITENSKAPELIGE UNIVERSITET (NTNU)	Katharina Scheidl katharina.scheidl@ntnu.no	Høgskoleringen 5, Realfagbygget 05-170, 7491 Trondheim	Nikon Inspect-X and CT Pro, VGStudio Max, open-source image processing software	NTNU - RECX - Radiografi	custom-built X-radiography (4-µm spatial resolution with frame rates up to 6 per second)	X-ray	Custom-built setup, VISCOM 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		day	Remote and/or physical	01/07/2022 to 31/07/2022	
				NTNU - RECX - Tomografi	Nikon HT225 µ-CT scanner	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		day	Remote and/or physical	01/07/2022 to 31/07/2022	
15-THE UNIVERSITY OF EDINBURGH (UEDIN)	Dr Ian Butler ian.butler@ed.ac.uk	School of Geosciences, The King's Buildings, James Hutton Road, Edinburgh EH9 3FE	Acquisition code written in-house. Processing codes include Avizo, Dragonfly (academic license only) and open source software (e.g. ImageJ)	UEDIN - Micro-CT	custom-built µ-CT scanner	X-ray	Bespoke instrument, 160 kV transmission/reflection source, Micos UPR-100 Air rotary table for sample/cell masses up to 2 kg, Perkin Elmer 0822 XRD, a-Si, 16 bit, 1 MP flat panel camera (Gadox scintillator), Radicon shadocam 4K, CMOS, 12 bit, 4 MP flat panel camera. Sample size up to 100 mm diameter. Long samples acquired in multiple scans.	5	day	Physical		