

INSTITUTE		FACILITY			EQUIPMENT					DETAILS FOR APPLICATION			
EXCITE partner	Facility	Facility manager	Facility address	Processing and acquisition software available at facility	Available equipment name	Equipment type (EM or X-ray)	Equipment description	Sample preparation offered?	Details on sample preparation	Maximum units of access per proposal	Access modality	Period of equipment unavailability	
1-UNIVERSITEIT UTRECHT (UU)	UU - EM Centre	Markus Ohi (m.ohi@uu.nl)	Yalelaan 1, 3584 CL Utrecht	Avizo, Aztec, Esprit, Zen, Atlas, Velox, GMS3, STEMx, Donovan, Zeiss Reconstructor	Thermo Fisher Helios Nanolab 3G (FIB-SEM)	EM	FIB-SEM with Cryostage. Nordlys EBSD, Oxford xxx EDS, Gatan CL.	YES			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)	YES			Remote and/or physical		
					Thermo Fisher Spectre 300 (STEM)	EM	30-300 kV (S)TEM. Double aberration corrected microscope with a variable acceleration voltage (30, 80, 200 and 300 kV), enabling high-resolution imaging up to 50 pm both in TEM and STEM imaging mode. Equipped with EDX spectrometry for chemical mapping, and ultra-high-resolution electron energy loss spectrometry (UHR-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.	YES			Remote and/or physical		
					Zeiss Gemini 450 (SEM)	EM	High-end SEM with low vacuum capabilities. Symmetry EBSD detector, Oxford xxx EDS, Delmic CL, Quorum Cryostage	YES			Remote and/or physical		
					Zeiss Evo 15 (SEM)	EM	Environmental SEM with Peltier cooling stage, 2x Bruker EDS and automated mineralogy	YES			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)	YES			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.	YES			Remote and/or physical		
2-UNIVERSITEIT GENT (Ugent)	Ugent - UGCT	Laurenz Schroer, Laurenz.Schroer@Ugent.be	Proeftuinstraat 86, 9000 Gent, Belgium	Octopus, VGStudioMax, Avizo, Dragonfly	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 77 µm² is complemented with a large-area Varian flat-panel detector.	NO				Remote and/or physical	
					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.	NO			Remote and/or physical		
					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 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.	NO			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.	NO			Remote and/or physical		
					IESCAN 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	NO			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).	NO			Remote and/or physical		

INSTITUTE	FACILITY				EQUIPMENT					DETAILS FOR APPLICATION		
EXCITE partner	Facility	Facility manager	Facility address	Processing and acquisition software available at facility	Available equipment name	Equipment type (EM or X-ray)	Equipment description	Sample preparation offered?	Details on sample preparation	Maximum units of access per proposal	Access modality	Period of equipment unavailability
3-HELMHOLTZ-ZENTRUM DRESDEN/ROSSENDOUF, EV (HZDR)	HZDR - HIF - Spectral-CT	Jose Godinho, j.godinho@hzdr.de	40, Chemnitz Strasse, 09599, Freiberg, Germany	Avizo, Dragonfly, Panthera	Core-Tom (tescan), with spectral detector	X-ray	Core-Tom (tescan), Resolution >5um, 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.	YES			Physical	
4-HELMHOLTZ-ZENTRUM POTSDAM - DEUTSCHES GEOFORSCHUNGSZENTRUM (GFZ)	GFZ - PISA	Vladimir, Roddatis, roddatis@gfz-potsdam.de	Telegrafenberg, D-14473 Potsdam	Velox, TIA, Digital Micrograph, Tomography, Nanomegas, Aviso, QSTEM, Dr. Probe, TEAM, TSL OIM, Slice&View	Themis Z (FEG-STEM)	EM	Thermo Fisher 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 ER/1065 (EELS, EFTEM); TEM, STEM and EDX Tomography Data Acquisition Software; Low-dose Exposure Technique; Precession electron diffraction	YES			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 Tridiem (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	YES		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.	YES		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	YES		Remote		
					ZEISS Ultra Plus (FEG-SEM)	EM	Zeiss Ultra Plus SEM with a tungsten-zircon field-emission filament (Schottky type). Acceleration voltage 0.02 to 30 kV. Magnifications: 12- 1,000,000x for secondary electron (SE) images and for backscattered electron (BSE) images. Resolution 1.0 nm at 15 kV. Probe current 4 pA – 20 nA. Inlens SE and in-column BSE detectors (EsB), ET-SE detector, Angle selective BSE detector (AsB), UltraDry SDD (EDS) detector (Thermo Fisher Scientific), Panchromatic (Imaging) CL detector (EMSystems). Mobile cryo table plus transfer system VCT 100 (LEICA/BAL-TEC).	YES		Remote and/or physical		
5-UNIVERSIDAD DE GRANADA (UGR)	UGR - CIC - X-ray µ-CT	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	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 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.	YES	Contact with the technician responsible for preparation details	5 days	Remote	20/12/22 - 08/01/23
	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.	YES	Contact with the technician responsible for preparation details	5 days	Remote	20/12/22 - 08/01/23

INSTITUTE		FACILITY			EQUIPMENT					DETAILS FOR APPLICATION		
EXCITE partner	Facility	Facility manager	Facility address	Processing and acquisition software available at facility	Available equipment name	Equipment type (EM or X-ray)	Equipment description	Sample preparation offered?	Details on sample preparation	Maximum units of access per proposal	Access modality	Period of equipment unavailability
6-CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)	CNRS-INSU-CrystalProbe-Montpellier	Fabrice Barou fabrice.barou@umontpellier.fr	Geosciences Montpellier, cc.060, Univ. Montpellier, Pl. Eugene Bataillon, 34095 Montpellier cedex5, France	Aztec software, MTEX, Channel 5	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	YES	Take contact with the engineer responsible for preparation demands	5 days	Remote and/or physical	
7-UNIVERSITETET I OSLO (UIO)	UIO- IKO - MicroCT	Liebert P. Nogueira l.p.nogueira@odont.uio.no	Institute of Clinical Dentistry Geitmyrsveien 69, 0455 Oslo, Norway	Bruker CTAn, Dataviewer, Dragonfly Availability via VDI Virtual Machine	microCT Skyscan 1172	X-ray	microCT Skyscan 1172, resolution 2 µm in voxel	NO	Take contact with the engineer responsible for preparation demands	5 days	Remote and/or physical	
	UIO- IKO - NanoCT				nanoCT SkyScan 2211	X-ray	nanoCT SkyScan 2211, resolution 300 nm in voxel	NO	Take contact with the engineer responsible for preparation demands	5 days	Remote and/or physical	
	UIO- GEO- SEM	Siri Simonsen siri.simonsen@geo.uio.no	Department of Geosciences, University of Oslo, Sem Sælands vei 1, 0371 Oslo, Norway	Bruker Esprit 2.3; CrossCourt4 Rapide (HR-EBSD); Odemis (CL)	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).	YES	Final polish with vibratory polisher for EBSD samples	4 days	Remote and/or physical	
8-UNIVERSIDADE DA BEIRA INTERIOR (UBI)	UBI- FCUL- EPMA lab	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"	JEOL JXA-8200 electron probe microanalyzer (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	NO	Very good polished surfaces, irrespective of material, thin section dimensions: 4.7cm x 2.7cm (L x W) and 1.5 mm thickness max ; polished surface dimensions: cylinders with 2.5 cm diameter and minimum 0.5 cm and maximum	60 hours	Remote and/or physical	
	UBI- I NEG- EPMA	Fernanda Guimarães fernanda.guilmaraes@neg.pt	Rua da Arnieira, S. Mamede de Infesta	Standard JEOL	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.	NO	Take contact with responsible for preparation demands	4 days	Physical	

INSTITUTE		FACILITY			EQUIPMENT					DETAILS FOR APPLICATION			
EXCITE partner	Facility	Facility manager	Facility address	Processing and acquisition software available at facility	Available equipment name	Equipment type (EM or X-ray)	Equipment description	Sample preparation offered?	Details on sample preparation	Maximum units of access per proposal	Access modality	Period of equipment unavailability	
9-THE CHANCELLOR MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UCAM)	CAM - WEMS	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	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 (Protochips Poseidon) holders.	YES	FIB preparation only please take contact	5 days	Remote and/or physical	23/12 2022 - 02/01/2023	
					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.						
					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 Tridlem spectrometer/imaging filter for energy-filtered TEM (EFTEM). A rotatable Mollenstedt-Ducker biprism allows for off-axis holography and a Lorentz lens allows field-free imaging of magnetic specimens.						
					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.						
					FEI Helios Nanolab SEM/FIB	EM	Dual beam Focused Ion Beam (FIB) Scanning Electron Microscope (SEM) instrument SEM/FIB, TEM lamella sample preparation (OmniProbe), Pt, Teos, and Carbon Deposition. FIB/SEM tomography, EDS and Electron Backscattered Diffraction analysis are provided, with Oxford Instruments detectors.						
					HRI: ZEISS CrossBeam 540 SEM/FIB ZEISS GeminiSEM 300	EM	Dual beam Focused Ion Beam (FIB) Scanning Electron Microscope (SEM) instrument SEM/FIB, Pt, Teos, and Carbon Deposition. FIB/SEM tomography.						
	CAM - ES.MDS - FEG Electron MicroProbes	David Wallis, dw584@cam.ac.uk	Department of Earth Sciences, Downing St, CB2 3EQ, Cambridge (UK)	ThermoFisher Maps (SE/BSE/CL imaging); ThermoFisher iMeasure, iDiscover, NanoMin (EDS + BSE); Bruker Esprit, MatLab-MTEX (EDS, EBSD); Jeol FEG EPMA - Jeol software and Probe software.	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 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 <100nm to be chemically mapped.	NO	N/A	5 days	Remote and/or physical		
	CAM - ES.MDS - SEM QEMSCAN				FEI QEMSCAN 650F (FEG-SEM) with electron backscattered diffraction (EBSD) and cathodoluminescence (CL)	EM	QuantaFEG650 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 6j30. Quantitative Evaluation of Minerals by Scanning electron microscopy (QEMSCAN); this EDS based method aids in phase mapping, modal proportion analysis, 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.	NO	N/A	4 days	Remote and/or physical		
	11-UNIVERSITE DE PAU ET DES PAYS DE L'ADOUR (UPPA)	UPPA - DMEX - High resolution tomography	Pascale Senechal, pascale.senechal@univ-pau.fr	UPPA-DMEX, Avenue de l'université, BP 1155, 64013 Pau, France	ORS Dragonfly and open source software such as Fiji	ZEISS Xradia Versa 510 (X-ray µ-CT) with possibility to perform in situ/in operando analyses	X-ray	The Zeiss Xradia Versa 510 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 4D experiments. Test cell to be provided by the user.	YES	DMEX can run on cores from ~2mm up to 5cm diameter (depending on the material and its properties), perform vacuum saturation (for porosity and density estimation), over-drying, and		Remote and/or physical	23/12/2022 - 02/01/2023
		UPPA - DMEX - High speed tomography				Tescan UniTOM XL (X-ray µ-CT) with possibility to perform in situ/in operando analyses and chemical mapping (prototype)	X-ray	The Tescan UniTOM XL offers voxel sizes ranging between ~1 and 150µm (unbinned data) on millimeter 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. Test cell to be provided by the user.	YES		Remote and/or physical	23/12/2022 - 02/01/2023	

INSTITUTE		FACILITY			EQUIPMENT					DETAILS FOR APPLICATION		
EXCITE partner	Facility	Facility manager	Facility address	Processing and acquisition software available at facility	Available equipment name	Equipment type (EM or X-ray)	Equipment description	Sample preparation offered?	Details on sample preparation	Maximum units of access per proposal	Access modality	Period of equipment unavailability
12-ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA (INGV)	INGV-OV - X-ray MicroCT	Lucia Pappalardo, lucia.pappalardo@ingv.it	Via Diocleziano 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)	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 μ m). Imaging mode in absorption and phase contrast. Device to perform high temperature-high pressure in-situ experiments and time-resolved (4D) imaging.	YES		5 days but longer periods can be evaluated	Remote and/or physical	
	INGV-RMI - FESEM/EMP Δ	Manuela Nazzari, manuela.nazzari@ingv.it	Via di Vigna Murata 605, 00143, Roma	Jeol and Oxford Aztec software	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: <ul style="list-style-type: none"> 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 	YES	To be arranged. Polishing and coating equipments available.	5 days	Physical	
						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: <ul style="list-style-type: none"> Minimum probe dimension: 2.5nm Accelerating voltage: 15-30 kV Probe current: 5-200 nA Samples type: thin sections and one-inch epoxy-samples 	YES	To be arranged. Polishing and coating equipments available.	5 days	Physical
13-TECHNISCHE UNIVERSITEIT DELFT (TU Delft)	TU Delft - CITG - Medical(Macro)-CT scanner	Prof Pacelli Zitha, p.l.j.zitha@tudelft.nl	Department of Geoscience and Engineering, Stevinweg 1, 2628CN Delft, The Netherlands	Phoenix reconstruction software, Avizo 3D analyses software, Matlab/Python routines	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.	YES	Diamond drill coring and sawing of samples available at any sizes/diameter	10 days	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.	YES		20 days	Remote and/or physical	
14-NORGES TEKNISKNATURVITENSKAPELIGE UNIVERSITET (NTNU)	NTNU - RECX - Radiografi	Katharina Scheidl, katharina.scheidl@ntnu.no	Høgskoleringen 5, Realfagbygget 170	Nikon Inspect-X and CT Pro, VGStudio Max, open-source image processing software	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- μ m spatial resolution with frame rates up to 6 per second	NO			Remote and/or physical	23/12/2022 - 02/01/2023
	NTNU - RECX - Tomografi		7491 Trondheim		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 μ m to 10 μ m resolution - depending on the sample size, max sample size 30 cm/50 kg	NO			Remote and/or physical	23/12/2022 - 02/01/2023
15-THE UNIVERSITY OF EDINBURGH (UEDIN)	UEDIN - Micro-CT	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)	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). Rad-Icon shadocam 4K, CMOS, 12 bit, 4 MP flat panel camera. Sample size up to 100 mm diameter. Long samples acquired in multiple scans.	YES	Diamond drill coring up to 10 mm OD and 40 mm length	5 days	Physical	19/12/2022 - 09/01/2022