Instrument model (brand and full name)	Type	Additional information
The University of Sydney **Australian Key Centre for Microscopy and Microanalysis**		**Node Director: Prof. Simon Ringer** **Node Laboratory Manager: Mrs Ellie Kable**
Imago Local Electron Atom Probe	LEAP	Flagship
Imago Wide-Field-of-view Laser Atom Probe	LEAP	Flagship; pulsed-laser system
JEOL 3000F	TEM	Field-emission with EDS Oxford INCA; Gatan GIF; Gatan SC1000 11 Megapixel CCD with single-tilt cooling strain capability; HAADF with STEM
JEOL 2200FS	TEM	
JEOL 2100	TEM	
JEOL1400	TEM	
Philips CM12	TEM	EDAX EDS; Morada CCD 11 megapixels; low-background, double-tilt, cold-stage, cryo- and hot-stage holders
Philips CM120 Biofilter	TEM	Gatan GIF 1024 x 1024 pixels ; double-tilt holder
Fisons VGSTEM HB601	STEM	Cold-field-emission gun; Gatan ENFINA EELS; Oxford Instruments windowless X-ray detector; Gatan Digiscan
Zeiss Auriga Cross Beam	FIB/SEM	Focused Ion Beam and FESEM Dual Beam. Oxford Instruments X-Max SDD EDS; Oxford/HKL EBSD; STEM
Hitachi S-4500	FESEM	Cold Field Emission SEM
FEI Quanta 200 3D DualBeam FIB	FIB/SEM	Variable-pressure DualBeam; ESEM; EDAX Genesis 2000 Super Ultra-thin EDS; Renishaw Raman inVia Reflex microscope; Raman Spectroscopic Analysis
Philips XL 30 CP	SEM	Ultra-thin EDS; controlled pressure
Zeiss UltraPlus	FESEM	Bruker SDD EDS; Oxford-HKL EBSD; STEM detector; In-lens backscatter detector (EsB); Charge Compensator
Zeiss EVO-50 (Quemscan)	SEM	LaB6 Gun. Dedicated mineral liberation system (Intellection Quemscan) with 4 EDS Detectors
Leica TCS SPII Multi-photon	Confocal	Becker and Hickel FLIM, X,Y Stage
Olympus FluoView FV1000	Confocal	Photoactivation FRAP and FLIP with SIM scanner
Olympus CellR	Confocal	Fluorescent microscope for live-cell imaging
Olympus TIRF	Confocal	Total Internal Reflection Fluorescence microscope with 488 laser
Nikon C1 LIMO Confocal with Fluorescence Lifetime Imaging	Confocal	For fluorescence lifetime measurement
Nikon Eclipse E800 Fluorescence Microscope (SensiCam)	Optical	With bright-field phase contrast, DIC; SensiCam 12bit cooled CCD colour camera
Olympus BX61 Motorized System (SIS)	Optical	Reflecting and transmitted light microscope; SIS Image Analysis software
Zeiss Axioplan (Kontron)	Optical	Bright-field and fluorescence microscope; Zeiss KS400 Image Analysis software
Zeiss Axioskop 2 MAT Light Microscope	Optical	DIC; Axiocam camera with Axiovision software
Zeiss Axiotech Vario 100HD Reflecting	Optical	Reflecting light microscope with large stage suitable for examining large specimens (eg bones)
Olympus BX60	Optical	Reflecting and transmitted light microscope; Axiocam camera with Axiovision software;
Siemens XRD D5000	XRD	X-ray diffraction
Shimadzu XRD S6000	XRD	X-ray diffraction; heating stage
Skyscan 1072 Micro-Computed Tomography	MicroCT	X-ray microtomography system; compression stage
Xradia Micro XCT	MicroCT	X-ray Microtomography system - high resolution
Xradia Nano XCT	Nano CT	X-ray Microtomography system - ultra high resolution
Molecular Imaging PicoSPM	SPM	Atomic force microscope and scanning tunnelling microscope; contact mode; AC-tapping mode; MAC-tapping mode
Ntegra Near-Field Scanning Optical Microscope	NSOM	SNOM + AFM
Materials Specimen Preparation		
Struers DP-U2 Grinding Wheel		
Allied High-Tech Techprep8 Grinding Wheel		
Allied High-Tech Tripods (x6)		
Struers Accutom Diamond Saw		
Struers Accutom-50 Diamond Saw		
Buehler Isomet 11-1180 Low-speed Diamond Saw		
Gatan 691 Precision Ion Polishing System (PIPS)		
Gatan 691 Precision Ion Polishing System (PIPS)		Equipped with cold stage
Struers LectroPol 5		
Fischione 3000 Ion-beam Thinner		
Struers TenuPol-5 Electropolishing Jet Thinner		
Technoorg Linda Gentle Mill		
Stuers RotoPol-22 with RotoForce-4 and Multidoser		
Biological Specimen Preparation		
FEI Vitrobot		
Leica Reichert Ultracut S Ultramicrotome	UMT	
Leica Reichert FCS Cryo-ultramicrotome	UMT	
Leica Ultracut 7 Ultramicrotome	UMT	
Leica Ultracut T Ultramicrotome	UMT	
Leica Ultracut E Ultramicrotome	UMT	
Leica EM PACT HPF High-pressure Freezer	HPF	
Leica EM AFS Automatic Freeze-substitution Unit	AFS	
Balzers Freeze Fracture		
Leica Vibrotome		
Leica KMR3 Glass Knifemaker		
BAL-TEC Critical Point Dryer 030	CPD	
Biomolecular Specimen Preparation		
Veriti Thermal Cycler		PCR Machine
Biomate 3 Spectrophotometer		
DNR BioImaging System		Imager of electrophoresis and Chemiluminescent results
Sanyo Bacterial Incubator		
Ratek rotating bacterial incubator		
Thermo Scientific Cr3i Centrifuge		
Thermo -86°C freezer		
Ratek Orbital Mixing Incubator		
Cell-Culture Preparation		
CCL Biological Cabinet Class II x 2		
CytoSafe Cytotoxic Drug Safety Cabinet		
ES-315 Autoclave		
Victor Plate Reader		Technologies and reading modes include fluorometry, luminometry, fluorescence polarisation, time-resolved fluorometry (TRF), and photometry (including UV absorbance)
Thermo CO2 Incubators x 3		
SEM Specimen Preparation		
Dynavac Xenosput chromium coater		
Emitech K550X sputter coater		
Emitech K950X carbon coater		
Drying oven		
The University of New South Wales **Electron Microscope Unit**		**Node Director: Prof. Paul Munroe** **Node Laboratory Manager: Ms Jenny Norman**
JEOL 1400	TEM	Tungsten (120kV) with JEOL EDS, Gatan CCD camera and double-tilt holder
Philips CM200	TEM	Field-emission (200kV) with EDAX EDS detector, double-tilt holder and SIS CCD camera
FEI Tecnai G2 20 STWIN	TEM	LaB6 (200kV) with Bruker SDD EDS
Hitachi S3400N	SEM	Tungsten gun, variable pressure with Bruker SDD EDS
Hitachi S3400N	SEM	Tungsten gun, variable pressure with Thermo EDS
ZEISS Auriga Cross-Beam	FIB/SEM	DualBeam FIB with Oxford X-Max SDD EDS and HKL/Oxford EBSD
Hitachi S-900	SEM	Field-emission (In-lens)
JEOL JSM-7001F	SEM	Flagship; field-emission with JEOL SDD EDX, EBSD and CL
FEI NanoSEM 230	SEM	Flagship; Field-emission, variable pressure with Bruker SDD EDS and Gaseous Secondary Electron Detector
FEI xP200 Focused Ion Beam	FIB	Focused ion beam
FEI Quanta 200	ESEM	Tungsten gun with EDAX EDS
FEI Nova Nanolab 200 DualBeam FIB	FIB/SEM	Flagship; DualBeam FIB with EDAX EDS system and EBSD
JEOL JXA-8500F Hyperprobe	EPMA	Flagship; Field-emission, 4x WDS and SDD EDS
JEOL JSPM-5400 MkII	SPM	Vacuum chamber and cold stage
Digital Instruments Dimension-3000	AFM	
Digital Instruments MultiMode	SPM	Multi-mode scanning probe microscope
Skyscan 1072 Micro-Computed Tomography	MicroCT	80kV and 100uA x-ray source
Leica EM UC6	UMT	Ultramicrotome

Leica EM FC6	UMT	Cryo-ultramicrotome
Australian National University Electron Microscopy Facility		**Node Director: Prof. Tim White Node Laboratory Manager: Dr Frank Brink**
Hitachi H7100FA	TEM	(125kV) with SIA 4000 x 2600 CCD camera
Philips CM300	TEM	(300kV) with digital camera and EDS
Cambridge S360	SEM	With EDAX
JEOL JSM6400	SEM	With Oxford ISIS EDS
Hitachi S4500	SEM	Field-emission
Hitachi 4300 SE/N	SEM	Field-emission (extended variable pressure) with Oxford INCA 350 EDS and cold stage
Zeiss UltraPlus	SEM	Field-emission with Oxford INCA 450 EDS and HKL EBSD, gas injection charge compensation
X-ray Micro-Tomography Facility	MicroCT	Purpose built at ANU
Nanoscope Digital Instruments (x2)	AFM	
The University of Queensland Centre for Microscopy and Microanalysis		**Node Director: Prof. John Drennan Node Laboratory Manager: Mr John Nailon**
JEOL JEM1010 TEM	TEM	SIS CCD camera, Gatan Anticontaminator 651, vacuum transfer holder, cryo transfer holder
JEOL JEM1010B TEM	TEM	SIS CCD camera
FEI Tecnai 20F FEGTEM	FETEM	With STEM Unit, Tecnai double-tilt holder, EDAX EDS
JEOL JEM2100 TEM	TEM	STEM, HAADF, Gatan digital camera, double-tilt holder 646
FEI TECNAI 12	TEM	SIS digital camera, Gatan cryo transfer holder, cryo holder, cryotrap
FEI Tecnai T30F High-Throughput Cryo-FEGTEM Facility	FETEM	Flagship; Gatan Slowscan CCD camera, Direct Electron LP Digital Camera
JEOL JEM1011 TEM	TEM	SIS digital camera
JEOL JSM6300F SEM	FESEM	Image Slave aqusition board
Philips XL30 SEM	SEM	Oxford Opal EBSD, Oxford cathodoluminescence, EDAX EDS, FEI Chamber IR Camera, Oxford cryoprep unit
JEOL JSM890 SEM	FESEM	
JEOL JSM-6610	SEM	Raith EBL, LaB6, Chamberscope, Large Eucentric Specimen Stage
JEOL JSM6460LA	SEM	JED-2300 UltraMiniCup EDS Detector, IR Chamber Scope, HKL Chanel5 EBSD, Phase ID
JEOL JSM-7001F	FESEM	Super Hybrid Lens, EDS Det., Chamber Scope, Retractable BSE, Oxford Incawave WDS, Leybold TMP
JEOL JCM-5000 Neoscope (x2)	SEM	LV Mode
JEOL JXA8200 EPMA	EPMA	JEOL EDS detector, 5 x WDS spectrometers, optical microscope
Kratos Axis Ultra XPS	XPS	
Nanoscope AFM	AFM	
Bruker Advance XRD Defractometer	XRD	
Bruker Advance XRD - 2 Defractometer	XRD	
Anton Paar SAX SESS	SAXS	
VG Sector 54 TIMS		
Thermal Infrared Mass Spectrometer		
Thermo X series ICP-MS		
Nu Analytical Plasma HR MC-ICPMS		
Ancillary Equipment		
Tousimis Samdri-795 (x2)	CPD	Fully Automatic CPD
XsitTEMR Ex-situ Micromanipulator Unit		System for ex-Situ liftout of FIB samples, Leica Stereo Microscope
Leica Crion Antistatic Unit		
Leica UC6	UMT	
Leica UC6	UMT	
Leica Ultracut T	UMT	
Leica S	UMT	
Cressington Freeze Fractur/Etch Unit		
Cressington High Vacuum Coater		
JEOL JEE 4X High Vacuum Coater		
Denton High Vacuum Coater		
3 X Gatan Dry Pumping Station		
Balzers High Pressure Freezer		
Leica High Pressure Freezer		
Gatan PIPS Ion Mill		
Fischione Plasma Cleaner		
Fischione Electro Polisher		
Leica Ultracut S & FCS Cryoultratome	UMT	
Leica Ultracut T & FCS Cryultraotome	UMT	
Leica UC6 Cryo-Ultramicrotome	UMT	
Leica UC6 Cryo-Ultramicrotome	UMT	
Leica Freeze Substitution		
Leica AFS - FC6		
Leica AFS - FC6		
Vitrobot Freezer		
Olympus BX61 Research Microscope		
Olympus BX51 Research Microscope	LM	Fluorescence, DIC, Olympus DP70 Digital Camera
Olympus Inverted Optical Microscope		
Kyowa Stereo Binocular Microscopes X4	LM	
Olympus Trinocular Optical Microscope		
Olympus SZH Research Microscope	LM	
Olympus BX60 Research Microscope	LM	Q-Imaging Digital Camera
	LM	
The University of Western Australia Centre for Microscopy, Characterisation and Analysis		**Node Director: Prof. David Sampson Node Laboratory Manager: Mr Steve Parry**
Cameca NanoSIMS 50	Ion Microprobe	Flagship; Cs+ or O- ion probe, multi-collector system (5 masses) at up to 50 nm (Cs+) or 200 nm (O-) lateral resolution
Cameca IMS 1280 Ion Microprobe	Ion Microprobe	Flagship;
Zeiss 1555 VP	SEM	Field-emmission, high-vacuum and variable-pressure, with BSE, CL, Oxford Instruments EDS, in-lens SE detector
JEOL 6400	SEM	Oxford Instruments ISIS EDS, CL, BSE, digital image capture system
Philips XL30	ESEM	High-vacuum, variable-pressure, wet-imaging, hot-stage, Peltier-cooled stage, with BSE and SE
JEOL JXA-8530F Microprobe	EPMA	Field Emission, Integrated WDS-EDS, CL, BSE, Digital Image Capture System
JEOL 3000F	TEM	Field-emission Gun, 300kV, BF/HAADF detectors, Oxford Instruments INCA EDS, GATAN image filter
JEOL 2100	TEM	LaB6, 80-200kV, 11M pixel digital camera, Tridiem GIF, STEM. Optimised for biological imaging and analysis
JEOL 2000FXII	TEM	Routine TEM imaging
Leica TCS SP2	Confocal	Eight lasers and multi-photon excitations; simultaneous signal collection with 3 PMTs; FLIM; scan resolution up to 2048 x 2048 pixels
Nikon A1	Confocal	Four Colour Confocal Microscopy. Multipoint and live time-lapse imaging using Tokai Hit incubation chamber, Spectral Detection and unmixing
Olympus IX-81 Inverted Fluorescence Microscope	LM	Four Colour epifluoresence imaging (UV, blue, green and red excitation), Multipoint and live time-lapse imaging using Tokai Hit incubation chamber
Zeiss AxioPlan	LM	Brightfield, Phase Contrast, DI, three colour epifluoresence imaging (UV, green and red excitation)
Aperio Scanscope Digital Slide Scanner	LM	Digital brightfield slide scanning, histological analysis software
Digital Instruments Dimension-3000	SPM	
Becton Dickinson FACS Calibur Flow Cytometer		With 488 nm and 635 nm lasers, routine 4-colour analysis (FITC, PE, PerCP/PE-Cy5/PI, APC), forward/side-scatter measurements
Becton Dickinson FACScan Flow Cytometer		Single laser (488 nm), supports routine 3-colour analysis (FITC, PE, PerCP/PE-Cy5/PI), forward/side-scatter measurements
BD FACSCanto II Flow Cytometer		
BD INFLUX Cell Sorter		
Luminex 200 Bead Array		
Micromass VG Autospec		
Shimadzu GCMS QP2010		
Waters GCT	NMR	
Bruker Avance 600 MHz NMR Spectrometer	NMR	
Bruker Avance 500 MHz NMR Spectrometer	NMR	
Varian 400 MHz NMR Spectrometer	NMR	
Varian INOVA 300 MHz NMR Spectrometer		Microwave Processor
Xcalibur PELCO biowave		

Vibrotome 3000		
Leica EMPACT2 High Pressure Freezer		Automatic Freeze-Substitution Unit
Leica EM AFS2		Turbo Freeze Dryer
Emitech K775X	PIPS	
Precision Ion Polishing System		
Ultrasonic Disk Cutter		
Buehler Handimet two-roll Grinder	MCT	
SkyScan 1076		
CRI Maestro2		BioImaging System
IVIS Lumina		
		With laser tweezers, fluorescence
PALM Laser Microdissector	UMT	
Leica EM UM6 Cryo-ultramicrotome	UMT	
Reichert-Jung Ultacut E Ultramicrotome		
		Node Director: Prof. Joe Shapter **Node Laboratory Manager: Mr John Terlet**
South Australian Regional Facility		Contact: Mr John Terlet
The University of Adelaide, Adelaide Microscopy	FIB/FESEM	Flagship; EDAX GENESIS EDS, TSL EBSD
FEI Helios NanoLab DualBeam FIB/FESEM	FEG ESEM	EDAX TEAM EDS System with an ApolloXP SDD
FEI QUANTA 450FEG	S/TEM	EDAX DX4 EDS, GATAN PEELS, GATAN SSC, Cryo
Phillips CM200	EPMA	4 x WDS, EDS, SAM-X operating system
CAMECA SX51	EPMA	5 x WDS, SDD EDS
CAMECA SX-Five	LAICPMS	Agilent 7500cs with Newave 213 laser
Laser Ablation ICPMS	ICPMS	Agilent 7500
Solution ICPMS	LAICPMS	Agilent 7000 with Resonetics Excimer Laser
Laser Abalation ICPMS Imaging	Confocal	With FLIM
Leica SP5	Confocal	2 Photon - Second Harmonic Generation Microscopy with Mira Ti /Saphire laser
LaVision BioTech Trim Scope	TEM	SIS Digital Iamging System
Philips CM100	SEM	SE, BSE, EDAX Genesis EDS, Gatan CL
Philips XL20	FESEM	Field-emission, SE, BSE, EDAX Genesis EDS, Oxford HR1500 Cryo, HKL EBSD
Philips XL30	ESEM	GSED,SE,BSE, EDAX Genesis EDS (Dual Detectors)
Phillips XL40	MicroCT	X-ray microCT
Skyscan 1072	MicroCT	In-vivo X-ray microCT
Skyscan 1076	BET	Surface Area & Porosity Measurement
MicroMetrics Gemini VII		In-vivo bio-luminescent/fluorescent imaging system
Xenogen ISIS 100	NSOM/AFM	
NT-MTD NTEGRA	LMD	Laser-capture/dissection microscope, Fluorescence
Leica LMD		Laser-capture/dissection microscope, Fluorescence
PALM Laser Capture		
Huber Guinier image plate camera	Optical	Fluorescent Stereo Zoom 3D software
Leica MZ16F	Optical	Fluorescence, SIS Digital Imaging System
Olympus BX51		Model 950 Advanced Plasma System
GATAN Solarus Plasma Cleaner	UMT	
Leica EM UC6	UMT	
Leica Ultracut E	UMT	Cryo-equipped
Leica Ultracut S		Slow-speed diamond cut-off saw
Struers Minitom		Electro Chemical Polisher
Struers Tenupol-3		Automated Polishing System
Struers TegraPol - 11	Ion Mill	LN2 cooled stage
GATAN Duo Mill		
Cressington HE55 Freeze Fracture		Magnetron sputter coater
Cressington 208HR		
GATAN Dry Pumping Station	Optical	Polarising Microscope
Nikon LV100 Pol	Optical	Inverted, fluorescent
Olympus IMT2		Model 208HEN
Gelaire Class II Biosafe Cabinet		Microwave fixation apparatus
PELCO BioWave		Freeze substitution
Reichert AFS		Critical-point drying apparatus
Baltec CPD-030		Cryo preparation, slam freeze, plunge freeze
LEICA EMCPC		Cryo preparation, slam freeze, plunge freeze
Med-Vac Slam Freezer		Contact: Mr Philip Moore
University of South Australia, Ian Wark Research Institute	ToF-SIMS	Flagship;
PHI TRIFT V nanoToF ToF-SIMS	XPS	X-ray photoelectron spectrometer fully optioned
KRATOS Axis Ultra DLD	OWLS	Optical waveguide lightmode spectroscopy
MicroVacuum OWLS 120	AFM	
Digital Instruments Nanoscope II	AFM	
Asylum MFP-3D-Bio	Ellipsometer	Precision optical table for multi-angle measurements, wavelength: 600 nm
Beaglehole Imaging Ellipsometer	SPR	Evanescent-field-based technique to measure surface absorption
Resonant Probes Surface Plasmon Resonance	DSC	Modulated differential scanning calorimeter, sub-ambient to 600ºC, pressure DSC, 1600ºC DTA Cell
Differential Scanning Calorimeter	TGA	Thermo-gravimetric analyser, ambient to 1000ºC, high-resolution TGA, Modulated TGA
Thermogravimetric Analyser	SDT	Simultaneous thermo-gravimetric and differential scanning calorimetry, ambient to 1500ºC
Simultaneous Differential Thermal Analyser	DMA	Dynamic mechanical analyser, sub-ambient to 600ºC
Dynamic Mechanical Analyser	TMA	Thermo-mechanical analyser, sub-ambient to 1000ºC
Thermomechanical Analyser	NMR	300 MHz, nuclear magnetic resonance spectrometer, solution probe-5mm PABBO BB/19F-1H/D Z-GRD Z828401/0060; solid probe -4 mm
BRUKER AV-II-300	SEM	Two liquid nitrogen free EDX detectors, SIP file creation capability, sample preparation facilities, data analysis and interpretation service available through a qualified mineralogist.
QEMSCAN®		Contact: Prof. Joe Shapter
Flinders University Nanotechnology, School of Chemical and Physical Sciences	AFM/STM	
Nanoscope V	AFM	
Nanoscope E	XPS	
Leybold	AFM	
NovaScan AFM/Optical Tweezers	Confocal	
Leica SP5	Confocal	
BioRad 1024	TEM	
JEOL 1200 EX	TEM	
JEOL 1200 EX	SEM	
JEOL JSM35	SEM	
ETEC	Confocal	
Witec Alpha 500 Confocal/NSOM Raman System	QCM	
Quartz Crystal Microbalance	SPR	Surface plasmon resonance ellipsometer
Biacore 2000	SEM	
FEI Phenom	SEM	
CamScan CS44FE	ICPMS	
Aligent 7500 ICPMS	ES	Electron Spectrometer
SPECs Metastable Impact Electron Spectroscopy	NICISS	Electron Spectrometer
NEUTRAL IMPACT COLLISION ION SCATTERING Spectrometer (NICISS)		