Type of equipment: microscopy, spectroscopy, chromatography, mechanical/rheological properties, polymer processing/printing, nanoparticle characterization, biological evaluation	Location (e.g. Gillies lab, Nanofab, SSW)	Instrument name	Manufacturer and model, date	Overall capabilities	Contact
Biological Evaluation	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	Gel Preparation Instrument	Ettan IPGphor II	Performs first dimension of 2D gel electrophoresis, protein isoelectric focusing (IEF). Can run up to 12 IPG strips from 7cm to 24 cm. Both fixed and variable -length strip holders available.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			BIO-RAD protean Plus Dodeca Cell	Accomodates up to 12 large gels. Equipped with cell cooling, recirculation, and plate electrodes. Includes the PROTEAN Plus hinged spacer plates, PROTEAN Plus multi-casting chamber and the model 495 gradient former.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			BIO-RAD Mini-PROTEAN 3 Dodeca Cell	Capable of running multiple polyacrylamide gels simultaneously. Equipped with a built in cooling coil attached to an external refrigerator circulator to prevent overheating. A stirbar maintains uniform buffer temperature.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			BIO-RAD Criterion Dodeca Cell	Used to run 1 to 12 Criterion gels simultaneously.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			BIO-RAD PROTEAN Dodeca Stainer	Gel staining device that accomodates up to 12 gels. Compatible with Bio-Safe colloidal Coomassie Brilliant Blue G-250 stain, Coomassie Brilliant Blue R-250 stain, SYPRO Ruby protein gel stain, mass spectrometry compatible Dodeca Silver stain kit and the original Silber stain kit.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
Biological Evaluation	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences	Gel Imaging and Analysis	Epson Perfection 4990 Photo Scanner	Contains a built-in transparency unit with moving light source. It can scan gels up to 8.5" x 11.7" in size.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950

	Building Room 351)		ProXPRESS 2D Proteomics Imaging System	UV/Visible transmission and fluorescence imager capable fo measurements on a variety of media including gels, microsope slides, tissue culture plates and exposed film. Maximum scanning area 330 x 270 mm and resolution up to 33 microns. 2D imaging is equipped with the following filter: excitation: 460/80, 480/30, 550/10 emission: 530/30, 650/150, 580/10 for fluorescence scan, as well as 2/0 for silver and coomassie scan.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			GE Storm 820 Phosphorimager	Performs autoradiography for nucleic acid and protein gel analysis. Scan area can be as large as 35x 43 cm.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			Progensis SameSpots	2D gel image analysis tool that allows for spot alignment at the pixel level, resulting in 100% matching across all gels in an experiment.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			Ettan Spot Picker	Robotic system desinged to pick protein spots from 1D or 2D gels and trasfer the picked gel spots into a 96 well microplate in preparation for sutomatic digestion. Manual and Automatic functions are available. Capable of picking up to 384 plugs in any single picking run.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			Waters MassPREP Station for Automated In-gel Digestion	Designed for automated de-staining, reduction, alkylation, in-gel proteolytic digestion of proteins and extraction of pepetides. After extraction, peptide solutions are lyophilized for minimal sample loss, complete process takes 2-3 days. Allows for two 96-well plates to be processed simultaneously.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86950
			LC-MALDI Prep	Not implemented yet.	
Biological Evaluation	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Surface plasmon resonance system	Biacore X	Used for real-time biomolecular interaction analysis, the measurement of kinetic and equilibrium constants and analysis of multiple binding patterns.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85302
Biological Evaluation	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Surface plasmon resonance system	Nicoya OpenSPR	Can be used to obtain affinity, kinetics and binding specificity for proteins, peptides, antibodies, DNA, RNA and small molecules.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85302

Biological Evaluation	Gillies Lab MSA 3210	Plate Reader	Tecan, Infinite M1000 Pro, 2011	For use with standard microplates for Absorbance and Fluorescence intensity measurements, polarization and luminesce measurements and AlphaScreen/AlphaLISA Assays.	E. Gillies egillie@uwo.ca
Chromatography	Gillies Lab MSA 3210	GPC	Wyatt miniDawn LS detector, WTREOS-03, Waters HPLC pump, 515, 2007 Waters UV-Vis detector, 2489, 2007 Wyatt optilab REX RI detector, WREX-09, Varian, PLGel Mixed-D columns	GPC running in THF with capabilities to separate polymers ranging in MW of 100 to 1,000,000	E. Gillies egillie@uwo.ca
Chromatography	Gillies Lab MSA 3210	GPC/HPLC	Waters Alliance HPLC pump, 2695, 2007 Waters PDA detector, 2998 Waters RI detector, 2414 PLAquagel	GPC running in Aqueous solvents with capabilities to separate polymers ranging by MW and HPLC analysis	E. Gillies egillie@uwo.ca
Chromatography	Biotron	dual GC-uECD/TCD	Agilent 7890	Volatile Analysis, manual injection gas sample, autosampler, specific in the range of 0.01 ppm	biotron_analytical@uwo.ca
Chromatography	Biotron	GC-TCD	Agilent 7890	1 and 10 mg accuracy autosampler, specific in the range of 0.01 ppm	biotron_analytical@uwo.ca
Chromatography	Biotron	dual GC-uECD/TCD	Agilent 7890	Halogenated organic analysis, autosampler, specific in the range of 0.01 ppm	biotron_analytical@uwo.ca
Chromatography	Biotron	GC-MS/FID	Agilent 7890	Headspace analyzer, programable fro any chromatographic organic parameter, built in library, autosampler, specific in the rang eof 0.01 ppm	biotron_analytical@uwo.ca
Chromatography	Biotron	Inductively Coupled Plasma-MS	Agilent 7700	Identification and quantification of ions in samples. Trace elemental analysis by semi-quantitative and full quantitative method. Covers wide mass range from 6 to 260 amu. Autosampler and HPLC-ICP-MS capable.	biotron_analytical@uwo.ca
Chromatography	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Ion chromatography	Dionex DX 500	For analysis of cations, anions and organic acids in solution.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca

Chromatography	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Gas Chromatographs	HP-5730		519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			HP-5890		519-661-3881 Fred J Longstaffe flongsta@uwo.ca
Chromatography	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	FPLC system	Amersham AKTA	Biocompatible, large scale saple preparation system capable of ion exchange/size exclusion/affinity/hydrophilic interaction/reversed phase chromatography. Equipped with P-903 Pump, UV-900 Detector, pH/C-900 Monitor (pH and conductivity measuremnt during LC) and Frac-9000901 Fraction Collector (automated collection of up to 175 fractions).	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86949
Chromatography	London Regional Proteomics Centre (Medical Sciences Building Room 394)	HPLC	Waters Breeze, Waters 1525 pump, Gilson FC203B fraction collector	Equipped with a dual wavelength detector, capable of binary gradient flows. Used in a hands-on mode for mapping or purifying pepetides. Users provide their own columns.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85304
Diffractometry	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	X-ray diffractometer	Rigaku	High brilliance rotating anode. Co K-alpha radiation. Equipped with IBM-PC computer automation.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
Diffractometry	Surface Science Western LL31	X-ray diffractometer	Rigaku, Smartlab 3kW	This fully loaded system is a high-resolution XRD equipped with a Cross Beam Optics (CBO) system and a high-precision theta-theta goniometer featuring a horizontal sample mount and a 2D HyPix-3000 detector. System capabilities: Powder materials: phase identification, crystalline strain and size, crystallinity, structural analysis and refinement (Rietveld and RIR methods), stress measurement and transmission. Thin films: structural analysis, texture analysis, in-plane diffraction, crystal quality analysis (rocking curve and reciprocal space mapping), high resolution X-ray diffraction and reflectivity (HRXRD and HRXRR), GIXRD depth profiles, 2D stress and PF measurement. Small-angle X-ray scattering (SAXS): particle/pore size distribution and correlation length analysis, nanoscale structural analysis.	

Diffractometry	Chemistry X-ray Facility ChB12	Single Crystal Diffractometer	Bruker, Apex II, 2007	Equipped with Mo X-ray radiation tube, an Apex II CCD detector, 4-axis KAPPA goniometer, K780 X-ray generator. Capable of collecting data at low temperatures with the use of the Oxford cryosystems 700series VT controller. Running the Bruker ApexII crystallographic software.	pboyle@uwo.ca 519-661-2111 x 82743
Diffractometry	Chemistry X-ray Facility ChB12	Single Crystal Diffractometer	Nonius, Apex II, 2007	Equipped with Cu X-ray radiation tube, and Apex II CCD detector, 4-axis goniometer, FR-590 X-ray generator. Capable of collecting data at low temperatures using the Oxford cryosystmes 600 series VT controller. Running the ApexII crystallographic software.	pboyle@uwo.ca 519-661-2111 x 82743
Diffractometry	Chemistry X-ray Facility ChB12	Powder Diffractometer	Inel, CPS, Powder Diffractometer	Equipped with a Cu-Xray radiation tube, Inel XRG 3000 generator and the Inel CPS 120 detector. Capable of collecting data on thin film samples with low incidence angles. Several software are available for analysis including the IMAD, Match! and Software. Also available is the PDF+ ICDD data base for reference look up or to search the library for powder references.	pboyle@uwo.ca 519-661-2111 x 82743
Diffractometry	London Regional Proteomics Centre (Medical Sciences Building Room 333) Macromolecular Crystallography Facility	X-ray diffractometer	MicroMax-007F, Saturn 994+ CCD detector	Comes equipped with a 4-circle 1/4 chi goniometer, mirrors, a Saturn 994+ CCD detector, crystal cooling X-stream system. Used for protein crystallography and a popular source for small molecule crystallographers who need the additional flux of a rotating anode generator.	Dr. Brian Shilton bshilton@uwo.ca 519-661-4124 Dr. Hong Ling hling4@uwo.ca 519-661-3557 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85296
Laser	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Laser Lines	Merchantek Mir 10-25	CO2 laser, BrF5 extraction line with online capabilities to the Delta Plus XL through dual-inlet mode or continuous flow. Dual chamber for analysis of reactive minerals.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Merchantek LUV 266X	UV laser ablation system. Fluorine extraction line online capabilities to the Delta Plus XL	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Airlock	Peripheral for Merchantek Mir 10-25 laser fluorination line. Isolation devise for materials that undergo low temperature reaction with fluorinating agents such as clay minerals.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca

Mechanical	Gillies Lab MSA 3250	Melt Press	Carver, 3851-OC, 2011	For use with ceramics, composites, rubber, silicone, elastomers, thermoplastic resins, and powder metals testing of physical properties such as compression strength, flexural strength, shear strength, flow and colour dispersion. Used for composite molding, compression molding, crushing, forming and encapsulation.	E. Gillies egillie@uwo.ca
Mechanical	Gillies Lab MSA 3250	Lyophilizer	Labconco, Freezone 2.5 plus, 2007	Evaporation of low volume aqueous solvents from samples.	E. Gillies egillie@uwo.ca
Mechanical	Fraunhofer Project Centre for Composites Research	Compression Moulding		Hydraulic press with maximum claming force of 25,000kN. Maximum closing speed is 800mm/sec. Capable for SMC, LFT, High Pressure RTM materials and processes. Additional features are Foaming Cycle, Vacuum Assisted Moulding, In-Mould Coating. Hot air oven for pre-heating of co-moulding structures. Mould heating and cooling with water up t o 180C and with oil up to 300C. Equipped for use with carbon fibres.	vugresi@uwo.ca 519-661-2111 x 86975
Mechanical	Fraunhofer Project Centre for Composites Research	Thermoset Sheet Moulding Compound		Laboratory units for development of SMC formulations. Direct Sheet Mould compound (D-SMC) line with a maximum sheet width of 800mm and a maximum throughput of 500kg/h. D-SMC line is capable of manufactruing of conventional SMC. Carbon fibre reinforements for SMC materials. Low density fillers and alternative resin systems. Hydraulic high-speed press with a maximum press force of 25,000kN and parallelism control. Vacuum assisted compression moulding.	vugresi@uwo.ca 519-661-2111 x 86975
Mechanical	Fraunhofer Project Centre for Composites Research	Long-Fibre Reinforced Thermoplastics		A technology using lightweight materials for semi-structural applications. Compounding twin screw extruder and mixing twin extruder. Hydaulic high-speed press with a maximum press force of 25,000kN and parallelism control. Foaming of polymers. Equipped with a hot air ovenfor pre-heating of local reinforcements. Capable of moulding for manufacturing two or three dimensional demonstrator components.	vugresi@uwo.ca 519-661-2111 x 86975

Mechanical	Fraunhofer Project Centre for Composites Research	Resin Transfer Moulding		Includes high performance composite components with continuous fibre reinforcements based on textile structures made from glass, carbon and aramide fibres. Dieffenbacher hydraulic pressure swith maximum clamping force of 25,000kN and parallelism control. Injection equipment; Kauss Maffei high pressure and Wolfangel low pressure RTM equipment, both with resin pre-heating capabilities. Linear and multi-axis robot systems for automated preform handling. Capable of processing different resin types including exposy, unsatruated polyester and polyurethane.	vugresi@uwo.ca 519-661-2111 x 86975
Mechanical	Fraunhofer Project Centre for Composites Research	Injection Moulding Machine	KraussMaffei, KM 1,600/12,000/4,300 MXL	Capable of moulding lightweight parts up to a size of automotive front end carriers. Equipped with a fibre-reserving long-fibre injection screw. Fitted with innovative foam injection moulding technology. All thermoplastic materials, unreinforced as well as short and long-fibre reinforced granules can be processed. Equipped with a circulating hot air oven for preheating of continuous-fivre reinforced, thermoplastic organic sheets. An integrated 6-axis robot is abl eto load the tapes and sheets in the oven to transfer them into the mould.	vugresi@uwo.ca 519-661-2111 x 86975
Mechanical	Fraunhofer Project Centre for Composites Research	Injection Moulding Machine	Fiberforge, RELAY Station 1000	Possible to manufacture continuous fibre reinforced thermoplastic components with the dimentsions of 1m to 1m. Different part thicknesses and fibre orientations can be realized to create load adjusted lightweight structures. Double creel system: tape width range continuously variable between 50mm and 150mm using a tape thickness between 0.1mm and 0.4mm	vugresi@uwo.ca 519-661-2111 x 86975

Mechanical	Fraunhofer Project Centre for Composites Research	Fiber Performing		With this equipment, the fiber cutting, stacking, draping and forming of these textiles is completely automated. Offers economical production of dimensionally stable and complex 3D shaped preforms using simple, modular operational principles. Up to 250kN closing force. Capable of processing a wide range of areal fabric wights with roll widths up to 2.6 meters and performs up to 2.5 meters square projected area. Robotic handlign of individual fabric layers between cutting table, binder stationa dn draping belt. Optional variable spray binder application of either thermoplastic or thermoset binders. Simulation tools available to determine blank shape and fiber orientation.	vugresi@uwo.ca 519-661-2111 x 86975
Mechanical	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Thermogravimetric and differential analyzer	Linseis	Custom designed; simultaneous TG-DT analyzer; combined vertical (1150°) and horizontal (1000°) heating systems. Best possible vacuum integrity for use in stable isotope analysis.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
Mechanical	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	Ultracentrifuge	Beckman Optima MAX	Capable of reaching speeds to 130,000 rmp. Ideal for pelleting of small particles that include viruses and subcellular organelles. Available rotors: MLS 50 Swinging-Bucket Rotor, MLA 80 Fixed Angle Rotor, MLA 130 Fixed Angle Rotor, TLN 100 Fixed Angle Rotor.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86946
Mechanical	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Isothermal Titration Calorimeter	MicroCal VP-ITC	Used for determination of thermodynamic parameters of ligand binding by proteins by measuring the heat generated or absorbed by a protein sample upon binding of substrate. Yield values for binding constants, reaction stoichiometry, enthalpy and entropy.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85305
Mechanical	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Analytical ultracentrifuge	Beckman Optima XL-A	Versatile and accurate instrument for determinig the native molecular weight and hydrodynamic properties of a protein or other macromolecule. Can also be used to probe the molecular shape of proteins or other biomolecules in solution, as well as self-association or hetero-oligomeric interactions wihtin protein samples.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85305

Mechanical	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Differential Scanning Calorimeter	MicroCal VP-DSC	Used in the thrmodynamic analysis of protein denaturation. Studing melting temperatures, thermodynamic parameters of denaturation, and cooperativity of melting can be studied in the range of -10 to 130°C.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85305
Mechanical	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Stopped flow system	BioLogic SFM-400	May be used for rapid kinetic analyses in conjuction with either the Jasco or the Fluorolog-3 fluorescence instruments. Equipped with 4 independently controlled syringes and provides submilisecond mixing with dead times down to 0.6 ms.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85305
Mechanical	Western Paleomagnetic & Petrophysical Laboratory (Western Sciences Centre, Room 36)	Magnetic susceptibility measurements	Sapphire SI2b, 1994	Measures magnetic susceptibility. Measurements are usually made with respect to sample mass, but can be made with respect to sample volume. If sample density is known measuremnts can be converted to volume-based susceptibility in cgs units. Capable of Anisotropy of Magnetic Susceptibility (AMS) measurements;	Dr. Phil J.A. McCausland pmccausl@uwo.ca
Mechanical	Western Paleomagnetic & Petrophysical Laboratory (Western Sciences Centre, Room 36)	Spinner magnetometer	Schonstedt SSM-2, 1981	Measures the Natural Magnetic Remanence (NRM) of a sample which is the permanent magnetization that it has acquired in its history. The instrument uses a six-spin configuration to revel intensity and direction of the NRM. Possible to establish a positive or negative polarity for the remanence direction. Possible to check if the observed magnetization is original or drill induced in core samples.	Dr. Phil J.A. McCausland pmccausl@uwo.ca
Mechanical	Western Paleomagnetic & Petrophysical Laboratory (Western Sciences Centre, Room 36)	Grain density measurement	Quantachrome Multipycnometer, 2006	Measurements of Grain Volume using helium as the inert gas to fill pore space in a sample. Sample volume can be calculated from a simple experiment.	Dr. Phil J.A. McCausland pmccausl@uwo.ca
Mechanical	Western Paleomagnetic & Petrophysical Laboratory (Western Sciences Centre, Room 36)	Thermal Demagnetizer	Magnetic Measurements, MMTD-80, 1998	Temperature controlled oven to demagnetize up to 80 2.5 cm rock cores. Maximum temperature 800°C. Can be used in conjunction with a d.c. power supply to remagnetize specimens. Heating can be done in air, argon or vacuum.	Dr. Phil J.A. McCausland pmccausl@uwo.ca

Mechanical	Surface Science Western LL31	Microhardness Testing	LECO LM-100 Microindentation Testser	Measure the hardness of materials. Using an elongated Knoop indentor capable of measuring the bulk hardness of metals, thin metal films and surface layers such as decarberization. Applied load can be adjusted from 10 grams to 1000 grams. The size of the microhardness indents vary depending on the material and applied load, but typically are approximately 100 microns in length. This means we can measure the hardness of very small areas.	Mr. Brad Kobe bkobe@uwo.ca 519-661-2111 Ext. 89203

Mechanical	Surface Science Western LL13	Weathering Chamber Q-SUN Xenon Test Chamber	Q-SUN, Q-SUNXE-3-HDSBSC	Simulates product demages such as crazing, hazing, fading and yellowing from exposure to sunlight, heat and moisture. This chamber can reproduce the damage caused by full-spectrum sunlight and rain over a period of months or years outdoors in a few days or weeks time. It utilizes three separate xenon lamps for a large capacity. The Q-SUN Xe-3 tester's slide out specimen tray is 451mm x 718mm and is useful for exposing large, three-dimensional parts or components. The Xe-3 tester offers standard humidity control, and spray, back spray and chiller features. The dual spray capability allows for a second liquid such as acid rain or soap solutions, to be sprayed onto test specimens. The following standard tests can be run with this chamber: AATCC TM16, AATCC TM169, ASTM C1257, ASTM C1442, ASTM C1519, ASTM C732, ASTM C734, ASTM C793, ASTM D1148, ASTM D1670, ASTM D2565, ASTM D3451, ASTM D4101, ASTM D4303, ASTM D4355, ASTM D4434, ASTM D4459, ASTM D4637, ASTM D4798, ASTM D4811, ASTM D5019, ASTM D5071, ASTM D5383, ASTM D5398, ASTM D5819, ASTM D6083, ASTM D6551, ASTM D6577, ASTM D6662, ASTM D6695, ASTM D6878, ASTM D7356, ASTM D750, ASTM D7869, ASTM D882, ASTM D904, ASTM D925, ASTM F1164, ASTM F1515, ASTM F2366, ASTM G151, ASTM G155, GM 9125P, IEC 61345, ISO 105-B02 (EN) (DIN), ISO 105-B04 (EN) (DIN), ISO 105-B06 (EN) (DIN), ISO 105-B07 (EN) (DIN), ISO 105-B10 (EN) (DIN), ISO 11341 (EN) (DIN). ISO 12040, ISO 29664, ISO 4892-1 (EN) (DIN), ISO 4892-2 (EN) (DIN), SAE J2412, SAE J2527, VW PV 1306, VW PV 3929, and VW PV 3930.	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870

Mechanical	Surface Science Western LL13	QUV Tester - Accelerated Weathering Tester	QUV, QUV/SPRAY/RP	Reproduces the damage caused by sunlight, rain and dew. It tests materials by exposing them to alternating cycles of UV light and moisture at controlled, elevated temperatures. To simulate outdoor weathering, the QUV accelerated tester exposes materials to alternating cycles of UV light and moisture at controlled, elevated temperatures. It simulates the effects of sunlight using special fluorescent UV lamps. It simulates dew and rain with condensing humidity and/or water spray. Types of UV weathering damage include color change, gloss loss, chalking, cracking, crazing, hazing, blistering, embrittlement, strength loss and oxidation. Two types of lamps are available with our QUV weathering chamber. The UVA-340 lamps give an excellent simulation of sunlight in the critical short wavelength region from 365 nm down to the solar cut-off of 295 nm. The UVB-313 lamps maximize acceleration utilizing short-wave UV that is more severe than the UV normally found at the earth's surface. Consequently, these lamps may produce unrealistically severe results for some materials. UVB-313 lamps are most useful for QC and R&D applications, or for testing very durable materials. The following test standards are applicable for our QUV weathering chamber: AAMA 624, AATCC TM186, ASTM C1257, ASTM C1442, ASTM C1501, ASTM C1519, ASTM C732, ASTM C734, ASTM C793, ASTM D1148, ASTM D1670, ASTM D3424, ASTM D3451, ASTM D4101, ASTM D4329, ASTM D4434, ASTM D4587, ASTM D4674, ASTM D4799, ASTM D4811, ASTM D5208, ASTM D5894, ASTM D6577, ASTM D750, ASTM D882, ASTM D904, ASTM D925, ASTM E3006, ASTM F1164, ASTM F1945, ASTM G151, ASTM G154, EN 13523-10 (DIN), GM 9125P, IEC 61215, IEC 61345, ISO 11507 (EN) (DIN), ISO 29664, ISO 4892-1 (EN) (DIN), ISO 4892-2 (EN) (DIN), and SAE	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870

Mechanical	Surface Science Western LL13	Salt Spray Q-Fog Cyclic Corrosion Tester	Q-Fog, CRH600HSC	Cyclic salt spray testing was developed to simulate exposures to outdoors and cyclic corrosion testing was found to provide structure, morphology, and corrosion rate results similar to those from obtained outdoor exposures. In our Q-FOG cyclic corrosion tester, the specimens are exposed to a series of different environments in a repetitive cycle that mimics outdoors. Simple cycles, such as Prohesion, may consist of cycling between salt fog and dry conditions. More sophisticated automotive methods may call for multi-step cycles that incorporate humidity, along with salt spray and dry-off. With our Q-FOG chamber, it is possible to cycle through all of the most significant corrosion environments. In addition, more complex exposure cycles can be manually programmed in our chamber and we will be able to run these tests to meet a wide variety of industry requirements. Numerous accelerated corrosion tests can be performed: ASTM B117, ASTM D1654, ASTM D1735, ASTM D2247, ASTM D2803, ASTM D3451, ASTM D4585, ASTM D5894, ASTM D6577, ASTM D6675, ASTM G85 (Prohesion Test), BS 2011 Pt2.1 Ka, BS 2011 Pt2.1 Kb, BS 3900 F12, BS 5466 1, BS 7479, DIN 50017, DIN 50021, Ford CETP 00.00-L-467, Ford FLTM BI 103-01, Ford FLTM BI 104-01, Ford FLTM BI 104-02, Ford FLTM BI 123-03, Ford FLTM BQ 105-01, GM 4298P, GM 4465P, GM 9540P, GMW 14729 (Option A), GMW 14872, GMW 3286, Honda HES D6001 sec 4.3, Honda HES D6501 sec 3.15.1, Honda HES D6501 sec 3.15.2, IEC 60068-2-11, ISO 16701, ISO 60082-2-52, ISO 6270-2, ISO 7253, ISO 9227, JIS H8502 Se. 7.3, JIS Z2371 Sect. 7.2.3, Mazda MES MN601, Mazda MES MN601, MCT-2M, Mazda MES MN601, MCT-3M, MIL-STD-202 (101E), Renault ECC1 - D17 2028, SAE J1959, SAE J2334, Toyota TSH 1555G, Volvo STD 1027.1375, Volvo STD 423-0014, and	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870

Mechanical	Surface Science Western LL13	Differential Scanning Calorimeter (DSC)	Mettler Toledo DSC 3, 22790	Used to measure enthalpy changes due to changes in the physical and chemical properties of a material as a function of temperature or time. Allows to identify or compare materials and to characterize them with regard to their structure or use. Temperature range: −100 to 700 °C Atmosphere: nitrogen or oxygen gas Heating rate: 0.02 to 300 °C/min Cooling rate: 0.02 to 50 °C/min Selected Applications in Industry: Measurement of characteristic temperatures of materials (e.g., melting, crystallization, glass transition) Identification or comparison of solids, powders, fibres, and viscous samples such as pastes, creams, or gels Investigation of chemical reactions and kinetics (e.g., how long a material takes to cure (cross-link), vulcanization, influence of stabilizers, plasticizers, or other additives) Thermal stability measurements (e.g., oxidation induction time (OIT), oxidation onset temperature (OOT))	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870
Mechanical	Surface Science Western LL13	Thermogravimetric Analysis (TGA)	Mettler Toledo TGA 2, 886	Measures the mass of a sample while the sample is heated or cooled in a defined atmosphere. The main use of TGA is to characterize materials with regard to their composition. Temperature range: room temperature to 1100 °C Atmosphere: nitrogen, air, or oxygen gas Heating rate: 0.02 to 250 °C/min Sample mass range: ≤1 g (typically 10–15 mg used) Selected Applications in Industry: Characterization of the thermal properties of materials such as plastics, elastomers and thermosets, mineral compounds, and ceramics, as well as for chemical products Measurement of composition (e.g., organics, carbon black, filler), purity, decomposition reactions, decomposition temperatures, and absorbed moisture content	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870
Mechanical	Western Paleomagnetic & Petrophysical Laboratory (Western Sciences Centre, Room 36)	Demagnetizer	Saphhire Instruments Si-4 AF, 2008	The differential probe extends the measurement capability of oscilloscopes in digital communication and high speed digital circuits.	Dr. Phil J.A. McCausland pmccausl@uwo.ca

Microscopy	Western Nanofabrication Facility	Scanning Electron Microscope	Leo 1540XB FIB/SEM	Equipped with an X-ray detector. Focused Ion Beam (FIB) enables in-situ cross sectioning for thickness measurement and elemental analysisof structures below the surface. Can also be used for the preparation of thin samples for Transmission Electron Microscopy (TEM) analysis.	nanofab@uwo.ca
Microscopy	Western Nanofabrication Facility	Scanning Electron Microscope	Leo 1530 SEM	Can provide valuable insight into a variety of materials, from metals to minerals to biological structures	nanofab@uwo.ca
Microscopy	Western Nanofabrication Facility	Microscope	Zeiss Axioskop	Inspection microscope with camera	nanofab@uwo.ca
Microscopy	Biotron	Confocal Microscope: Zeiss LSM 5 Duo	Zeiss LSM 5 Duo	Multipurpose confocal workstation. Delivers true 5D capability (X,Y,Z time and λ) by combining 3 instruments into one	biotron_microscopy@uwo.ca
			LSM 510	Multichannel point scanning offers 10 optically tunable laser excitation wavelength, variety of beamsplitters and filters. Detection ranging from UV to near IR.	biotron_microscopy@uwo.ca
			LSM 5 Live detector	Beam shaper for rapid laser LINE scanning to capture live cell processes. 95% detection efficiency. A live cell stage is available for maintaining sensitive cell culture samples in controlled temperature, humidity and CO2 conditions.	biotron_microscopy@uwo.ca
			LSM 5 Meta Detector	Separation and acquisition of 32 spectral channels in only 1.2 seconds. A built-in spectral database, automatic component extraction and linear unmixing technology for separation of fluorochromes. Performs emission fingerprinting. Characterizes unknown fluorescence signals through spectral analysis.	biotron_microscopy@uwo.ca
Microsopy	Biotron	Electron Microscope	Philips 420	Equipped with a LaB6 filament and accelerating voltages up to 120KV, especially suitable for nanomaterials. AMT4000 camera. Equipped with an EDAX Genesis X-ray microanalysis system for materials elemental characterization. Magnification range of 46x to 820,000x	biotron_microscopy@uwo.ca

Microscopy	Biotron	Electron Microscope	Philips CM10	Equipped with a LaB6 Filament and accelerating voltages up to 100kV. Excellent system for both biological and material imaging including plant cells, viruses, fimbriae and noparticles, as well as structure analysis and immunoelectron microscopy. Magnification range of 18x to 450,000x; Resolution 3 Angstrom	biotron_microscopy@uwo.ca
Microscopy	Biotron	Compound Fluorescence	Zeiss, Imager Z1	Ideal imaging solution for a wide variety of samples with superb optics. 8 channels of fluorescence plus bright field, dark field, phase and DIC imaging. Magnification from 2.5x to 100x. High sensitivy fluorescence and high resolution colour cameras. Automated Z-stack imaging with extended depth of focus module to bring all layers into sharp relief. Stitchign tiling mode for imaging whole tissues . 4D rendering software for 3D puls time rendering.	biotron_microscopy@uwo.ca
Microscopy	Biotron	Stereo Microscope	Zeiss, StereoLumar V12	Can provide a true stereo image at up to 125x magnification with sub-micrometer resolution in three fluorescent channels. It can image in both transmitted and reflected light modes. Perfect for developmental biology projects, especially those looking at fluorescent protein expression in whole organisms or tissues.	biotron_microscopy@uwo.ca
Microscopy	Biotron	Variable Pressure SEM	Hitachi, S-3400N Variable Pressure SEM	Equipped with a turbo-molecular pump for quick pump down times and reliable high vacuum performance. Suitable for imaging biological and geological specimens. Offers: high vacuum mode with both backscattered and secondary electron detectors; X-ray analysis; Peltier cooled stage and high resolutuion digital images. Magnification up to 300,000x. Can handle specimens up to 200mm in diameter. Can image wet or oily samples without standard SEM processing protocols. Equipped with an optical freezing stage that can work with extremely wet or temperature sensitive samples. Also useful for freeze fracture techniques that reveal detail in lipid containing materials.	biotron_microscopy@uwo.ca

Microscopy	EPMA Lab WSC RmG14	Field Emission Electron Probe microanalyzer	JOEL, JXA-8530F Hyperprobe, 2013	Capable of non-destructive quantitative analysis of micron-scale volumes for elements from B-U, with detection limits in the 100s range. Equipped with 5 wavelength dispersive X-ray spectrometeres, including H-type spectrometer and L-type spectrometer for trace elemental analysis and specialized analyzing crystals for light-elemental analysis. Also includes detectors secondary electron imaging, backscattered electron imaging, panchromatic cathodoluminescence imaging, silicon drift energy dispersive X-ray spectrometer. Can be used to map elements within a material and reveal inhomogeneities. Rapid identification of mineral phases.	epma@uwo.ca Dr. Gordon Osinski gosinski@uwo.ca Dr. Robert Linnen rlinnen@uwo.ca
Microscopy	EPMA Lab WSC RmG14	Compound Microscope	Olympus BX51	This polorizing microscope can be used for identification of isotropic and anisotropic materials, forensic analysis, thin film/polymer/crystal identificationa dn extraneous particulates. Equipped with a digital camera.	epma@uwo.ca Dr. Gordon Osinski gosinski@uwo.ca Dr. Robert Linnen rlinnen@uwo.ca
Microscopy	EPMA Lab WSC RmG14	Compound Microscope	Nixon LV100PL	Accomplishes advanced polarizing microscopy under both diascopic and episcopic illumination. Uses a12V50W light source that provides brighter illumination and sharp images with high S/N ratios. Equipped with digital camera	epma@uwo.ca Dr. Gordon Osinski gosinski@uwo.ca Dr. Robert Linnen rlinnen@uwo.ca
Microscopy	EPMA Lab WSC RmG14	Binocular Microscope	Nikon, SMZ1500	One of Nikon's most advanced stereomicroscopes. Covers a zoom range from 0.75x to 11.25x and allows to see and photograph speciment from macroviews to high-magnification micro visualization. High intensity illuminator.	epma@uwo.ca Dr. Gordon Osinski gosinski@uwo.ca Dr. Robert Linnen rlinnen@uwo.ca
Microscopy	EPMA Lab WSC RmG14	Optical Scanner	Cannon Canonscan 8800F	Relies on a LED light source and generic profile to deliver great results from negatives, slides and prints. High-resolution scans of thin sections/grain mounts/core	epma@uwo.ca Dr. Gordon Osinski gosinski@uwo.ca Dr. Robert Linnen rlinnen@uwo.ca

Microscopy	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	Mororized Inverted Microscope	Nikon Eclipse Ti-E	Equipped with InVivo Scientific heated incubation chamber with adjustable temperature and Co2 levels; Prior Scientific Optiscan Motorized XY stage for multi point imaging; Prior Scientific Lumen 200 metal halide light for fluorescence; Prior Scientific motorized filter wheels for automated multichannel fluorescence; Nikon digital Sight Qi1 cooled monochrome CCD for quantitative fluorescece imaging; 20x, 40x and 100x objectives; NIS-Elements Advanced Research 6D software for timelapse, multipoint multichannel fluorescence with FRET analysis module Anit-vibration table; filter sets: BF, DAPI, FITC, TRITC and ECFP, EYFP, mcherry	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86945
Microscopy	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Microscope	Cathodoluminescence	Used to identify multiple phases/zoning in carbonate and altered granitoid rocks.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Fluorescence	Used to determine micro-porosity within rocks	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Petrographic	Used for mineral identification, mineral photography	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
Microscopy	Surface Science Western LL31	Compound Microscope	Zeiss, Axioplan	Optical microscope images of microelectronic devices at various magnifications. Capable of magnifications ranging from 6.5X to 1000X, interfaced to a high resolution colour digital camera that allow capture of digital images. Imaging of cross sections, microstructure from etched metallurgical cross-sections, film thickness, layer thicknesses of cross-sections, imaging of defects on surfaces.	Ms. Heather Bloomfield hbloomf@uwo.ca 519-661-2111 Ext. 86751

Microscopy	Surface Science Western LL31	Scanning Auger Microscopy (SAM)	Physical Electronics Model 710 Field Emission Scanning Auger	High-resolution secondary electron imaging, < 4 nm spatial resolution. Small-spot Auger analysis, < 8 nm spatial resolution. Floating ion gun enables fast sputtering with least damage and charge neutralization. Survey scan analysis of elements from Li to U at outer 0.5 – 5 nm of the surface. Depth profiling (Ar+ ion gun, 50 ev to 5 kV). Surface-sensitive mapping to determine the presence and spatial distribution of elements at the very outer surface.Single and multi-point analysis. Can accommodate samples of 50 mm in diameter and 1 cm tall. Auger analysis can be conducted on metals and alloys, semiconductors, minerals, polymers and glasses. Charge neutralization can be utilized for analyzing insulating samples.	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870
Microsopy	Surface Science Western LL07	Confocal Laser Scanning	Zeiss Axio Imager, Z2m, LSM800	Uses laser light (405 nm wavelength) and an adjustable aperture to optically produce thin (nm to um) focal slices to optically section a sample. By changing the distance between the sample and the objective lens, through finely controlled steps in the Z direction, and by scanning the laser in the X/Y direction, an image stack is created with each pixel of each slice containing intensity information about the investigated surface. System includes C-Epiplan-Apochrome Objectives: 5x, NA 0.2; 10x, NA 0.4; 20x, NA 0.4 LD; 20x, NA 0.7; 50x, NA 0.55 LD; 50x, NA 0.95, Piezo measured motorized stage, Brightfield and Circular-DIC reflector cubes and a TIC filter.	Dr. Sridhar Ramamurthy sramamur@uwo.ca 519-661-2111 Ext. 86870

Microscopy/Spectroscopy	Surface Science Western LL31	Hitachi SU8230 Regulus Ultra High-Resolution Field Emission SEM	Hitachi, SU8230 Bruker, D12489	High resolution images of surface topography, with excellent depth of field are produced with a highly-focused, scanning electron beam. Capable of obtaining some qualitative elemental information. SEM accompanied by X-ray analysis, is relative rapid, inexpensive, and non-destructive approach to surface analysis. Imaging Detectors: 1) Lower secondary electron detector for topographic imaging, 2) Upper secondary electron detector for high resolution with E x B filter, 3) Top detector with energy filtration, 4) In-lens backscattered secondary electron detector (BSE), 5) Retractable backscattered secondary electron detector (PD-BSE), 6) BF-STEM and variable collection angle DF-STEM detector. Capable of light element detection from carbon to uranium; Fast mapping of rough surfaces with no shadowing; Low voltage analysis at high magnification; Quantitate mapping, particles analysis and phase analysis.	Mr. Brad Kobe bkobe@uwo.ca 519-661-2111 Ext. 89203
Microscopy	Surface Science Western LL31	Hitachi SU3900 Large Chamber Variable Pressure SEM combined with an Oxford ULTIM MAX 65 SDD X-ray analyzer	Hitachi, SU3500 Oxford, Aztec	High resolution images of surface topography, with excellent depth of field are produced with a highly-focused, scanning electron beam. Capable of obtaining some qualitative elemental information. SEM accompanied by X-ray analysis, is relative rapid, inexpensive, and non-destructive approach to surface analysis. Capable of elemental analysis from carbon to uranium; Semi-quantitative analysis with detection limits of ~ 0.1 weight % for most elements; Linescans and elemental mapping.	Mr. Brad Kobe bkobe@uwo.ca 519-661-2111 Ext. 89203

Microscopy	Surface Science Western LL31	Hitachi SU3500 Variable Pressure SEM combined with an Oxford AZtec X-Max50 SDD X-ray analyzer	Hitachi, SU3500 Oxford, Aztec	High resolution images of surface topography, with excellent depth of field are produced with a highly-focused, scanning electron beam. Capable of obtaining some qualitative elemental information. SEM accompanied by X-ray analysis, is relative rapid, inexpensive, and non-destructive approach to surface analysis. Capable of elemental analysis from carbon to uranium; Semi-quantitative analysis with detection limits of ~ 0.1 weight % for most elements; Linescans and elemental mapping. The Zone II cleaner uses a combination of ultraviolet (UV) and ozone to remove hydrocarbons from a sample surface, without any damage to the sample surface. For routine imaging and EDX analysis a thin coating of carbon or gold coating can be used, while chromium or iridium can be used for ultra-high resolution imaging.	Mr. Brad Kobe bkobe@uwo.ca 519-661-2111 Ext. 89203
Microccopy	Surface Science Western LL31	X-Ray Micro Computed Tomography	Zeiss, Xradia 410 Versa	Non-destructive 3D imaging technique (4-D with time-based measurements) that uses a highly energetic X-Ray beam to create a series of 2D projections, whose greyscales vary with the volume's internal density and atomic number variations. These projections are reconstructed to create a virtual 3D model, allowing users to "see" inside the sample without preparing, sectioning or destroying the sample. Minimum spatial resolution of 0.9 µm and a minimum voxel size of 100 nm at larger working distances; Automated objective carousel, with objectives: 0.4x, 4x, 10x, 20x: Advanced absorption and phase contrast capability (for soft or low atomic number materials) overcomes the limitations on traditional computer tomography; Vertical stitching mode enables the analysis of taller samples by joining tomographies from different sections of the sample; The in-situ tensile stage (500 N) enables measurements while the samples are under tensile or compression stresses.	Ivan Barker and Sridhar Ramamurthy

Microscopy	The Zircon and Accessory Phase Laboratory (B&G Rm1060)	SEM (Secondary Electron Imaging)	Hitachi SU6600 FEG-SEM Inca X-Max EDS Inca Wave WDS Gatan ChromaCL HKL EBSD CNT-MC Spark-3 EPD Optical Imaging Hitachi S2500 SEM	Secondary Electron Imaging microscope that images the sample surface by scanning it with high energy beam of electrons up to up to350,000x (Topography). Provides information about the sample's surface topography, composition and properties such as conductivity. Detection modes are Backscatter Electron Imaging, Energy Dispersive Spectrometry, Wavelength Dispersive Spectrometry, Nano-scale High resolution Electron Backscatter Diffraction, Colour Cathodoluminescence, Scanning Transmission Electron Microscopy.	Dr. Desmond Moser zaplab@uwo.ca 1-519-661-2111 ext. 88397 (ZAPLab) or ext. 87873 (FEG-SEM Room)
Microscopy	Surface Science Western LL31	Atomic Force Microscopy	Park Systems XE-100, PSIA	Uses fine tip to map surface morphology and mechanical and chemical properties through an interaction between the tip and surface. Used exclusively to study polymer surface structures and properties. Topographic images at a resolution on the nanometer scale and surface energy changes due to surface modification by UV/ozone treatment can be measured. Topographic images with a height resolution of ~0.1nm and lateral resolution down to nanometers. Phase imaging is especially powerful in revealing dispersions of additives in polymer composites. Friction force images to distinguish different materials, phases, and chemical properties.	Dr. Heng-Yong Nie hnie@uwo.ca 519-661-2111 Ext. 86734
Microscopy	Surface Science Western LL31	Contact Angle Goniometry	DSA30E, Drop Shape analyzer	Used for accurate measurements of surface free energy (SFE) and contact angle. Measurements capabilities: Contact angle measurements between a liquid and a solid; Surface-free energy from contact angles of several test liquids; Static, advancing and receding contact angles; Surface tension; Assessment of surface tension using the Pendant Drop Method; Analysis on inclined surfaces.	Ms. Mary Jane Walzak mwalzak@uwo.ca 519-661-2111 Ext. 86868 (retiring in May 2020) Ms. Becky Sarazen rebecca.sarazen@uwo.ca 519-661-2111 Ext. 86713

Microscopy	Surface Science Western LL31	Stereo Microscope	Wild, Heerbrugg	Optical microscope images of microelectronic devices at various magnifications. Capable of magnifications ranging from 6.5 X to 1000 X, and interfaced to a high-resolution colour digital camera that allow capture of digital images.	Ms. Heather Bloomfield hbloomf@uwo.ca 519-661-2111 Ext. 86751
Microscopy	Surface Science Western LL31	Digital Microscope	Keyence, VHX-S660E	Optical microscope images of microelectronic devices at various magnifications. Capable of magnifications ranging from 6.5 X to 1000 X, and interfaced to a high-resolution colour digital camera that allow capture of digital images.	Ms. Heather Bloomfield hbloomf@uwo.ca 519-661-2111 Ext. 86751
Microscopy	Surface Science Western LL31	Stereo Microscope	Zeiss, Discovery V8	Optical microscope images of microelectronic devices at various magnifications. Capable of magnifications ranging from 6.5 X to 1000 X, and interfaced to a high-resolution colour digital camera that allow capture of digital images.	Ms. Heather Bloomfield hbloomf@uwo.ca 519-661-2111 Ext. 86751
Microscopy	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	IR imaging system	Li-COR Biosciences, Odyssey	Infrared imaging system that uses two independent infrared fluorescent channels for detection, enabling simultaneous two-colour target analysis.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86948
Nanofabrication	Western Nanofabrication Facility	Deposition	Angstrom Electron Beam Evaporation	Pristine thin film deposition of metals.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Deposition	Edwards Auto500 Magnetron Sputtering	Three magnetrons for deposition of metal, metal oxide and magnetic targets.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Deposition	STS Plasma Enhanced Chemical Vapour Deposition	Deposition of silicon nitride an silicone oxide.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Deposition	IKO Electroplating Bench	Uniform copper deposition on a 4 inch wafer.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Deposition	Filgen OPC80T Osmium Plasma Coater	Deposition of an amorphous layer of osmium on samples requiring a conductive layer for SEM analysis.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Lithography	Neutronix-Quintel NX4006 Mask Aligner	An integrated optical-mechanical, pneumatic-electrical machine that aligns and exposes substrates coated with photoresist. Uses physical mask inscribed onto high quality transparency or chromium on glass. The pattern on the mask is reproduced by means of UV irradiation onto a photoresist.	nanofab@uwo.ca

Nanofabrication	Western Nanofabrication Facility	Lithography	Karl Suss MA6 Mask Aligner	Performs high resolution photolithography. Offers flexibility in the handling of irregularily shaped substrates of differing thickness. Uses a physical mask inscribed onto high quality transparency or chromiumon glass. The pattern on the mask is reproduced by means of UV irradiation onto a photoresist.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Lithography	Zeiss 1530 e-beam Lithography	Micro and nanocharacterization by electgron beam induced crurrent technique. Focused electron beam scans a photopolymer surface to reproduce a digital CAD plan. New Raith System is optimized to inscribe small features over large surfaces using as stiching mode.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Lithography	Solitec 5110 Spin Coater	Spin coater for photoresist application	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Lithography	CEE 200 Spin Coater	Spin coater for photoresist application	nanofab@uwo.ca
Nanofabrication	Wester Nanofabrication Facility	Lithography	Yield Engineering YES-3TA HMDS Oven	Photolithography adhesion promoter	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Lithography	Innopsys Innostamp	Allows to transfer and pattern of an "ink" onto a surface. A stamp is first made using a rubber compound to reproduce a positive 3D matrix. The stamp is brought to contact with the substrate onto which the pattern ink is transferred.	nanofab@uwo.ca
Nanofabrication	Western Nanofabrication Facility	Etching	Trion Orion Reactive Ion Etcher	Room temperature oxygen plasma. Silicone/glass substrates etching.	nanofab@uwo.ca
Spectroscopy	London Regional Proteomics Centre (Functional Proteomics Facility Medical Sciences Building Room 351)	Multilabel Counter	PerkinElmer VICTOR 1420-10	Used for fluorometry, luminometry, photometry, TR-fluorometry and fluorescence polarization. Includes 2-channel liquid injector to start or terminate a process.	Ms. Victoria Clarke Ms. Kristina Jurcic fpf@uwo.ca 519-661-2111 x86947
Spectroscopy	Gillies Lab MSA 3210	Fluorimeter	Photon Technology International, 814, 2007	Measures steady state fluorescence and phosphoresence, phosphorescence lifetimes, luminescence, bioluminescence, and chemi-luminescence	E. Gillies egillie@uwo.ca
Spectroscopy	Gillies Lab MSA 3210	UV-vis Detector	Varian, Cary300 Bio, 2007	Measures Absorbance and Transmittance intensity through the UV-vis spectrum. Can be used for temperature controlled analysis. Equipped with multicell holders	E. Gillies egillie@uwo.ca
Spectroscopy	Gillies Lab MSA 3210	Zetasizer	Malvern, Nano-ZS, 2008	Size particle, Molecular Weight and Zeta potential Analysis	E. Gillies egillie@uwo.ca

Spectroscopy	J. B. Stothers NMR facility	NMR Spectrometer	Bruker, Avance III HD 400, 2017	Oxford AS400/54 magnet equipped with 5mm SmartProbe capable of Auto Probe Tuning and a 24 sample changer. Capable of collecting data on routine nuclei C13, H1, F19 and P31 as well as less common odd nuclei. Running the TopSpin3.5 / Icon5 software.	Dr. Mathew Willans chemnmr@uwo.ca 519-661-2111 x82905
Spectroscopy	J. B. Stothers NMR facility	NMR Spectrometer	Varian, Inova400, 2000	Oxford AS400/54 magnet equipped with 5mm Direct Detection Autoswitchable HFCP Manual probe. Capable of collecting data on common and odd nuclei and variable temperature experiments ranging between -80C to +130C. Running the VnmrJ 4.2 MI software.	Dr. Mathew Willans chemnmr@uwo.ca 519-661-2111 x82905
Spectroscopy	J. B. Stothers NMR facility	NMR Solid State Spectrometer	Varian, Infinity Plus 400, 2000	Wide-bore magnet used for solid state NMR experiemtns. 3-channel spectrometer with two high-power broadband amplifiers, plus high-power proton and fluorine amplifiers. Data acquisition at -120°C to 250°C.	Dr. Mathew Willans chemnmr@uwo.ca 519-661-2111 x82905
Spectroscopy	J. B. Stothers NMR facility	NMR Spectrometer	Varian, I600, 2000	Oxford AS600/51 magnet equipped with 5mm Direct Detection AutoX-DB manual probe. Capable of collecting data on common and odd nuclei and variable temperature experiments ranging between -30C and +130C. Running VnmrJ 4.2 MI software.	Dr. Mathew Willans chemnmr@uwo.ca 519-661-2111 x82905
Spectroscopy	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	FTIR	Bruker Vector 22	Press for making KBr pellets	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
Spectroscopy	Surface Science Western LL07	Fourier Transform Infrared Spectroscopy	Bruker Tensor II system with Hyperion 2000 microscope	Through recording the absorbance spectrum and showing the sample absorbed wavelengths, details about the molecular structure of the sample can be determined. Particularly useful in analyzing and identifying organic and some inorganic compounds. Samples can be as small as 20um and sensitive to concentrations greater than 3-5%. Hyperion 2000 microsope equipped with micro-attenuated total reflectance, imaging capabilities, a mapping stage with mapping capabilities, grazing angle objective with polarizer, transmission/reflection.	Ms. Mary Jane Walzak mwalzak@uwo.ca 519-661-2111 Ext. 86868 (Will be retiring in May 2020) Ms. Becky Sarazen rebecca.sarazen@uwo.ca 519-661-2111 Ext. 86713

Spectroscopy	Surface Science Western LL06	Laser Raman Spectroscopy	Renishaw InVia Reflex Raman Spectrometer	Useful for material identification with observing the vibrational, rotational, and other low-frequency modes in a system. Three wavelengths are available 785nm, 633nm and 514nm and two gratings, 1800 and 1200 l/mm. Also equipped with polarizer and half waveplate for each laser. Capable of analysis of powders, liquids and films and depth profiling.	Ms. Mary Jane Walzak mwalzak@uwo.ca 519-661-2111 Ext. 86868 (Will be retiring in May 2020) Thalia Standish thalia.standish@uwo.ca 519-661-2173
Spectroscopy	Surface Science Western LL31	Surface Profilometry	KLA Tencor P-17 Surface Profiler	Measures the surface topographical features, covering the roughness and waviness estimation and step height measurements. Capable for obtaining a 3D topographic image of the surface from which any scan lines can be isolated for analysis. System is capable of roughness quantification for surface finishing evaluation; SIMS crater depth measuremnt; Thickness measurement for thin metal and polymer films; Radius of curvature measurements; 3D surface morphology for detection of defects and corrosion and general surface imaging. Profilometer allows us to measure height differences from 5 nm to 1 mm. The instrument can handle samples as large as 8 inches in diameter and as heavy as 5 lbs.	Dr. Heng-Yong Nie hnie@uwo.ca 519-661-2111 Ext. 86734
Spectrometry	Western Science Centre G49	Ruthford Backscattering Spectrometry	941	RBS is most commonly used non-destructive nuclear analytical methods. Widely used for study of thin layers and for study of multilayer systems with thickness from nm to µm. RBS is very suitable for elemental depth analysis. From such measurement it is possible to determine, with some limitations, both the atomic mass and concentration of elemental target constituents as a function of depth below the surface. Measurement with this method may be performed on amorphous as well as crystalline materials. H and He beams are supplied by the 1.7 MeV Tanderm accelerator. A dedicated ion scattering chamber houses a 4-axis manipulator and two surface barrier detectors. Data acquisition is possible both in random and channeling geometries.	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson psimpson@uwo.ca

Spectrometry	Western Science Centre G49	Elastic Recoil Detection Analysis		ERD is a ion beam analysis technique for quantitative analysis of light elements in solids. Non-destructive nuclear analytical method for depth profilight of light elements in thin layers and multilayer systems. Measurements can be performed on amorphous as well as crystalline materials.	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson psimpson@uwo.ca
Spectrometry	Western Science Centre G49	Medium Energy Ion Scattering		MEIS is used to determine structural and compositional properties of surfaces and thin films. Dedicated UHV chamber contains a VG 6-axis sample manipulator (3 translations and 3 rotations). The MEIS technique utilized a toroidal electrostatic energy analyzer (TEA, High Voltage Engineering Europa) with an energy resolution (delta E/E) of 0.003). The position sensitive detector accepts ions scattered over a range of up to 30^{o} with a precision of 0.2^{o}. A spectrum of scattering events versus scattered energy and angle is collected in this experiment. Double alignment of incident and scattered ions with the crystal lattice allows high resolution measurement of the near surface structure.	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson psimpson@uwo.ca
Spectroscopy	Surface Science Western LL31	X-ray Photoelectron Spectroscopy (XPS) Supra	Kratos AXIS Supra Spectrometer, MI-600R04	A method characterizing surface composition. Analysis depends upon the measurement of the energies of photoelectrons that are emitted from atoms when they are irradiated by soft X-ray photons (1 – 2 keV).Capable of In-situ fracturing at low temperature; Sample heating (800°C and cooling (-100°C); Variable angle sample orientation; High precision automated stage; Depth profiling in with both monoatomic Ar+ and gas cluster beams (up to Ar3000+); Interfaced to a glove box for chemical preparation under inert atmosphere; Analysis of sample sizes up to 30 mm x 75 mm and up to 10 mm thick; Elemental and chemical imaging, small spot analysis; Multiple X-ray sources including monochromatic Al Kα, monochromatic Ag Lα, He(I) and He(II); Ion scattering spectroscopy (ISS) equipped.	Dr. Mark Biesinger biesingr@uwo.ca 519-661-2111 Ext. 86701

Spectroscopy	Surface Science Western LL31	X-ray Photoelectron Spectroscopy (XPS)	Kratos AXIS Nova Spectrometer	A method characterizing surface composition. Analysis depends upon the measurement of the energies of photoelectrons that are emitted from atoms when they are irradiated by soft X-ray photons (1 – 2 keV). Capable of Variable angle sample orientation; High precision automated stage; Depth profiling; Sample platens can hold numerous samples fo varying sizes; Elemental and chemical imaging; Monochromatic Al Kα X-ray source; MCP delay-line detector allowing for scanned and sanpshot data colletion; Transfer vessel can be used to transfer samples in vacuum; He(I) and He(II) ultraviolet source (UPS); Allows for mounting of air sensitive samples in a glove box and trasnfer under inert atmosphere.	Dr. Mark Biesinger biesingr@uwo.ca 519-661-2111 Ext. 86701
Spectroscopy	Western Nanofabrication Facility	Profilometer	Tencor P7	Used to measure surface's profile in order to quantify its roughness.	nanofab@uwo.ca
Spectroscopy	Western Nanofabrication Facility	Ellipsometer	Woollam Ellipsometer	Measures materials thickness using the materials refractive index.	nanofab@uwo.ca
Spectrometry	Western Science Centre G49	Particle-Induced X-ray Emission		Determines the elemental make-up of a sample. allows for solid samples to be analyzed without any pre-treatment and can detect many elements below 1ppm	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson psimpson@uwo.ca
Spectrometry	Western Science Centre G49	Nuclear Reaction Analysis		Method for the quantitative determination and depth profiling of selected light elements and isotopes.	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson
Spectrometry	Western Science Centre G49	Ion Implantation		The capability currently exists to implant samples with up to a 2 inch diameter at substrate temperatures in the range -195^{o}C to 600^{o}C. Wafers of 3 and 4 inch diameter can currently be implanted at room temperature only. Dose uniformity is on the order of 3%. The temperature is monitored by 3 thermocouples imbedded in the nickel block.	(519) 661-2111 x 83803 Jack Hendriks jhendrix@uwo.ca Lyudmila Goncharova lgonchar@uwo.ca Peter Simpson psimpson@uwo.ca
Spectrometry	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Mass Spectrometry	Thermo Finnigan Delta plus XL	Dual inlet and continuous flow capabilities, micro-volume, interfaced with GasBench, Costech EA, GC/C and PreCon peripherals.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca

			Thermo Finnigan Delat plus XL	Dual inlet and continuous flow capabilites, micro-volume, interfaced with TC/EA, CO2 laser with ClF3 extraction line, UV laser systems	
			Prism II	Dual micro-inlet, multiport, CO2 and H2 analysis	
			VG Optima	Dual micro-inlet, multiport, CO2 and H2 analysis	
Spectrometry	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Elemental Analyzers	Thermo Finningan High Temperature Conversion Elemental Analyzer (TC/EA)	For high temperature pyrolysis of water, minerals, phosphates and organic matter. Interfaced to Delta Plus XL for continuous flow analyses of O isotopes in organic matter and phosphates.	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Costech Elemental Analyzer	Interfaced to Delta Plus XL for continuous flow analyses of C, N and S isotopes	
			Carlo Erba Fisons 1108	% determination of C, N, H and S.	
Spectrometry	Western Science Centre Room 54 (Laboratory for Stable Isotope Sciene)	Automated peripherals	GasBench	High precision on-line isotope ratio determination of gas species, waters and carbonates. Combi-Pal autosampler	519-661-3881 Fred J Longstaffe flongsta@uwo.ca
			Pre-Con	Fully automated pre-GC/IRMS concentrator for the isotopic characterization of N2O and CH4 at natrual concentrations.	
			Gas Chromatograph/High Temperature Conversion (GC/TC)	Compound specific isotope analysis of δ13C, δ15N, δ18O and δ2H	
			Crusher	Automated crushing system interfaced with the GC-C-IRMS equipment for isotopic analysis of fluid infusions.	
Spectrometry	London Regional Proteomics Centre. MALDI Mass Spectrometry Facility (MSB 392)	Mass Spectrometry	AB Sciex TOF / TOF 5800 system	High speed acquisition and sensitivity for protein detecion in complex mixtures. Ideal platoform for gel spot analysis and biomarker discovery. Suitable for MALDI mass spectrometry imaging of tissue. High sensitivity MSA and MS/MS data on small molecules as well as peptides and proteins in tissues.	Ms. Kristina Jurcic maldi@uwo.ca 519-661-2111 x82806

Spectrometry	London Regional Proteomics Centre. MALDI Mass Spectrometry Facility (MSB 392)	Mass Spectrometry	AB Sciex 4700 Proteomics Discovery System	Based on MALDI tandem time-of-flight mass spectrometer with TOF/TOF optics. Indetification by peptide findgerprinting in MS mode, partial peptide sequencing of selected precursor ions after collision-induced dissocation in the MS/MS mode.	Ms. Kristina Jurcic maldi@uwo.ca 519-661-2111 x82806
Spectrometry	London Regional Proteomics Centre. MALDI Mass Spectrometry Facility (MSB 392)	Mass Spectrometry	Bruker Reflex IV Matrix Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometer	Research grade MALDI time-of-flight instrument equipped with linear/reflectron mass analyzer and post-source decay capability. Enables ultra sensitive analysis at attomole level for peptides and femtomole level for proteins.	Ms. Kristina Jurcic maldi@uwo.ca 519-661-2111 x82806
Spectrometry	London Regional Proteomics Centre (Siebens Drake Research Institute Room G31A)	Mass Spectrometry	Thermo Scientific Orbitrap Elite	Mass Spectrometer with dual pressure linear ion trap and high filed Orbitrap mass analyzer. Especially useful when analyzing samples with high complexity and targeting analtes of low abundance in applications such as proteomics, metabolomics and lipidomics. Requires low sample amounts.	Dr. Gilles Lajoie SDRI G31C 519-661-3054 glajoie@uwo.ca Paula Pittock 519-661-2111 x 86697 ppittock@uwo.ca
Spectrometry	London Regional Proteomics Centre (Siebens Drake Research Institute Room G31A)	Mass Spectrometry	Micromass Q-Tof Ultima Global Mass Spectrometer	Mass Spectrometer can be used in positive and negative ion modes in ESI mode. Equipped with lockspray which allows te introduction fo an internal standard without affecting ionization. Used often with a Waters nanoAcquity Ultra Performance LC for LC-MS and LC-MS/MS protein characterization including identificationa dn post transaltional modification analysis.	Dr. Gilles Lajoie SDRI G31C 519-661-3054 glajoie@uwo.ca Paula Pittock 519-661-2111 x 86697 ppittock@uwo.ca
Spectrometry	London Regional Proteomics Centre (Siebens Drake Research Institute Room G31A)	Mass Spectrometry	Quattro Micro Waters/Micromass, Agilent 1100 HPLC system	Triple quadropole mass spectrometer equipped with electrospay interface (ESI). Primarily usef for the routine MS analysis of small molecules, peptides and proteins. Capable of providing MS, LC-MS, LC-MS/MS, SRM, MRM and precursor ion scanning data in both positive and negative ion modes.	Dr. Gilles Lajoie SDRI G31C 519-661-3054 glajoie@uwo.ca Paula Pittock 519-661-2111 x 86697 ppittock@uwo.ca
Spectrometry	London Regional Proteomics Centre (Siebens Drake Research Institute Room G31A)	Mass Spectrometry	Q-TOF Micro Waters/Micromass	This is a smaller version of the orthogonal acceleration Q-Tof mass spectrometer with resolving power of 5000 and higher sensitivity than triple quadrupole mass spectrometers. Has both ESI and nonoelectrospray interfaces and is coupled to a Agilent HPLC for LC-MS and LC-MS/MS analysis.	Dr. Gilles Lajoie SDRI G31C 519-661-3054 glajoie@uwo.ca Paula Pittock 519-661-2111 x 86697 ppittock@uwo.ca

Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Spectropolarimeter	Jasco J-810	Aids in study of protein conformatin and stabilityby providing analysis of secondary structures using CD. CD measures the changes of folding in protein as a function of temeprature as well as protein-ligand and nucleic acid-ligand interactions.	Dr. Gilles Lajoie SDRI G31C 519-661-3054 glajoie@uwo.ca Paula Pittock 519-661-2111 x 86697 ppittock@uwo.ca
Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Fluorometer	Fluorolog-3	Photon-counting insrument used in the analysis of conformational changes in proteins through the fluorescence of endogenous tryptophan or fluorometric assays. Sample chamber is equipped with a stirrer and temperature control is available.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85297
Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Fluorescence spectrometer	PicoQuant Fluo Time 200	This system has single-photon timing sensitivity and contains the complete optics and electronics required for recording fluorescence decays by means of Time-Correlated Single Photon Counting (TCSPC). Allows for decay times in the picoseconds range to be resolved. Can distinguish between molecules of interest and background or othe species.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85297
Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 394)	Dynamic Light Scattering (DLS)	DynaPro	Used to study the sizes of macromolecules in the range of 0.5nm to 1um in hydrodynamic radius and determine if the samples are monodisperse. Used to assess the suitability of protein preparations for crystallization trials.	Dr. James Choy jchoy4@uwo.ca 519-661-3161 Lee-Ann Briere lbriere2@uwo.ca 519-661-2111 x85297
Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 309) Biomolecular NMR Facility	NMR Spectrometer	Varian INOVA 600 MHz	4 complete channels plus deuterium decoupling accessory. XYZ axial gradients, Variable Temperature control, Varian ^{13}C-enhanced HCN cold probe offering up to 4x ^{1}H and 2x ^{13}C sensitivity. VnmrJ 4.2 D software.	Dr. Gary S. Shaw MSB M306 519-661-4021 gshaw1@uwo.ca Dr. Liliana Santamaria lsantam2@uwo.ca
Spectrometry	London Regional Proteomics Centre (Medical Sciences Building Room 309) Biomolecular NMR Facility	NMR Spectrometer	Varian INOVA 600 MHz	4 complete channels plus deuterium decoupling accessory. XYZ axial gradients, Variable Temperature control, Varian 5-mm ^{1}H {^{13}C/^{15}N} triple resonance XYZ-PFG probe, Varian 8-mm ^{1}H{^{13}C/^{15}N} triple resonance Z-PFG probe. VnmrJ 4.2 D software.	Dr. Gary S. Shaw 519-661-4021 gshaw1@uwo.ca Dr. Liliana Santamaria lsantam2@uwo.ca

Spectrometry	Surface Science Western LL31	Dynamic Secondary Ion Mass Spectrometry	Cameca IMF-6f SIMS	Provides elemental and isotopic analysis of very small volumes situated on the surface of solid samples. The dynamic SIMS (D-SIMS) mode is characterized by the use of high density, DC primary ion beam currents providing typical sputter rates in the range 0.5-5nm/s. Under such conditions most chemical bonds are broken and only atoms or polyatomic fragments are ejected from the sample surface as neutrals or ions, thus restricting D-SIMS applications to elemental and isotopic depth profiling or mapping. The detection range of this technique extends from matrix element levels down to trace element levels in the ppb range. Provides elemental and isotopic analysis of very small volumes situated on the surface of solid samples. Improved transmission resulting in lower detection limits. Includes numerous imporovements on the 3f.	Mr. Gary Good ggood@uwo.ca 519-661-2111 Ext. 86742
Spectrometry	Surface Science Western LL31	Dynamic Secondary Ion Mass Spectrometry	Cameca IMfF-3f SIMS	Provides elemental and isotopic analysis of very small volumes situated on the surface of solid samples. The dynamic SIMS (D-SIMS) mode is characterized by the use of high density, DC primary ion beam currents providing typical sputter rates in the range 0.5-5nm/s. Under such conditions most chemical bonds are broken and only atoms or polyatomic fragments are ejected from the sample surface as neutrals or ions, thus restricting D-SIMS applications to elemental and isotopic depth profiling or mapping. The detection range of this technique extends from matrix element levels down to trace element levels in the ppb range. Elemental analysis covering the entire periodic table. Quantitative microanalysis with detection limits of 200-300ppb, which effectively addresses the analytical gap between the electron microprobe and bulk analytical techniques. Elemental depth profiling. Imaging of the elemental distribution with 1um spatial resolution.	Dr. Stamen Dimov sdimov@uwo.ca 519-661-2111 Ext. 89204

Spectrometry	Surface Science Western LL31	Time-of-Flight Secondary Ion Mass Spectrometry	ION -TOF GmbH, ION-TOF-SIMS IV	Extreme surface sensitivity with superior chemical selectivity allow for unique identification of chemical structrures and exploration of surface chemistry. Equipped with Bi+, Bi3+, Bi3++, Cs+ and C60+ ion sources. Surface analytical technique capable of detecting ions over a large mass rang of 1-10,000 atomic mass units. Capable of generating an image of lateral distributions of the secondary ions at spatial resolutions of better than 0.15 microns. Motorized sample stage allows for automated analysis, capable of holding wafers up to 8" in diameter/width and equipped with Heating/cooling capabilities.	Dr. Heng-Yong Nie hnie@uwo.ca 519-661-2111 Ext. 86734
Spectrometry	Mass Spectrometry Facility ChB 14	High Resolution Mass Spectrometry	Thermo Scientific DFS (Double Focusing Sector) Mass Spectrometer	Used for high resolution mass spectrometry and structure confirmation fo organic and inorganic species. Mass range of 0-1200 m/z. Sample analysis using Electron impact (EI) or Chemical ionization (CI). Samples can be introduced using solid sample probe, Direct Exporsure Probe, Dip-HT probe and Gas Chromatography using an auto sampler.	Doug Hairsine scidwh@uwo.ca
Spectrometry	Mass Spectrometry Facility ChB 14	Electrospray Time of Flight Mass Spectrometry (ESI MS)	Bruker micrOTOF II	Used for analysis of organometallic samples as well as protein samples with mass range 60-20,000m/z	Doug Hairsine scidwh@uwo.ca
			Micromass LCT	Mass range to 10,000m/z at a resolution of 5,000 FWHM.	
			Micromass/Waters Q-TOF Ultima LC-MS/MS system	Can operate in "V" and "W" reflectron mode and is capable of producing mass spectra at a resolution of up to 20,000 FWHM.	
Spectrometry	Mass Spectrometry Facility ChB 14	Matrix-Assited Laser Desorption/Ionization Mass Spectrometry	Bruker Daltonics Reflex IV	MALDI time-of-flight instrument equipped with a linear/reflectron mass analyzer and post-source decay capability. Extended mass range detector provides sensitivity up to 300,000 m/z.	Doug Hairsine scidwh@uwo.ca
Spectrometry	Mass Spectrometry Facility ChB 14	GC-MS	Schimadzu GCMS-QP2010	Bench top gas chromatograph/quadrupole mass spectrometer for high precision GC/MS analysis. Ideal for qualitative sample analysis and identification of unknowns or quantitation fo trace constituents. Electron impact only instrument with a mass range of 10-1000m/z. Equipped with Shimadzu AOC-20i autoinjector for automated sample injecting.	Doug Hairsine scidwh@uwo.ca