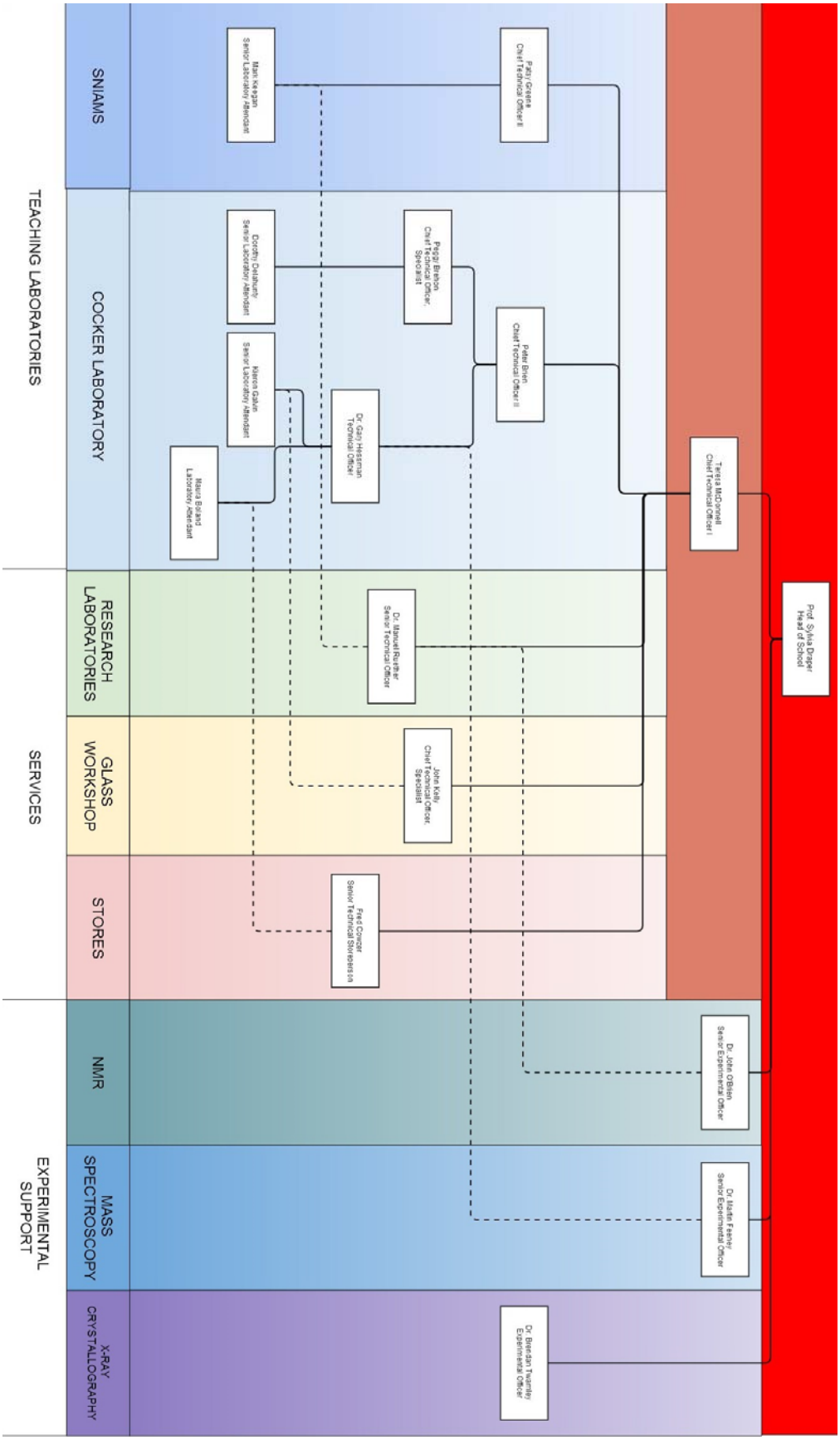
1. School Facilities/Instrumentation and Technical Staff Roles: Technical Staff roles are outlined below. The following pages display a directory of all facilities owned/maintained by the School of Chemistry. Facility locations can be found using google maps at this link.



NMR	Location	Contact/Training
Bruker Avance 400 NMR: • 2 channel spectrometer • 5mm QNP (^{1}H, ^{19}F, ^{31}P, ^{13}C}; Z-Grd probe • autosampler	Main Chemistry Building Room 0.4	Dr John O'Brien Dr Manuel Ruether
Bruker Avance II 600 NMR: • Three channel spectrometer Two probes for liquid samples: • 5 mm ^{1}H {^{13}C / ^{15}N} (^{13}C enhanced), cryoprobe with Z-Grd • 5 mm ^{1}H{^{109}Ag – ^{31}P} Z-Grd; broadband probe	Main Chemistry Building Room 0.4	
Bruker Avance III 400 NMR: • 2 channel spectrometer • 5mm ^{1}H {^{109}Ag – ^{31}P}; Z-Grd probe	Main Chemistry Building Room 0.5	
Agilent 400 DD2: • 2 channel spectrometer It has two probes for liquid samples: • 5 mm ^{1}H – ^{19}F {^{15}N - ^{31}P}; Z-Grd • 10 mm ^{15}N – ^{31}P {^{1}H}; Z-Grd • Autosampler, and a variable temperature control unit to run experiments below room temperature.	TBSI Room 7.36	Dr Manuel Ruether Dr John O'Brien (not for training)
Agilent 800 DD2 • 4 channel spectrometer It has three probes for liquid sample: • 5 mm ^{1}H {^{13}C / ^{15}N} (^{13}C enhanced), salt tolerant cold probe with Z-Grd • 5 mm ^{109}Ag - ^{31}P {^{1}H – ^{19}F} Z-Grd broadband probe • 5 mm ^{1}H {^{13}C / ^{15}N} XYZ-Grd, triple resonance probe And two MAS probes • 3.2 mm HX double resonance MAS; 25KHz ^{31}P to ^{15}N observe; ^{1}H to ^{19}F decouple channel • 1.6 mm HXF FastMAS; 8 - 40 KHz ^{31}P to ^{79}Br observe X; ^{23}Na to ^{15}N observe Y; ^{1}H to ^{19}F decouple	TBSI Room B3.06 / B3.07	Dr Manuel Ruether Dr John O'Brien (not for training) Dr Ken Mok (not for training)

Circular / Linear Dichroism	Location	Contact/Training
Jasco J-815 • Linear Dichroism • Range 165 nm – 900 nm	SNIAM Instrument room 1 (second floor)	Dr Manuel Ruether
Jasco J-810 • Circular Dichroism • Range 165 nm – 900 nm		

Infrared Spectrometer	Location	Contact/Training
Perkin Elmer FT-IR • Range 4200 cm^{-1} – 250 cm^{-1} • UATR accessory with Diamond/ZnSe crystal; range 4200 cm^{-1} – 650 cm^{-1} • TG-IR Hyphenation accessory	Main Chemistry Building Room 0.5	Dr Manuel Ruether
Perkin Elmer FT-IR • Range 4200 cm^{-1} – 250 cm^{-1} • UATR accessory with Diamond/ZnSe crystal; range 4200 cm^{-1} – 650 cm^{-1}	TBSI Room 6.35	
Perkin Elmer FT-IR • Range 8300 cm^{-1} – 350 cm^{-1} • Polarized UATR accessory with Diamond/Ks5 crystal; range 8300 cm^{-1} – 350 cm^{-1}	SNIAM Phys-Chem teaching lab Room 2.07	Dr Manuel Ruether Patsy Green (not for training)
Perkin Elmer FT-IR • **Range 15000 cm^{-1} – 4000 cm^{-1}**		
Perkin Elmer FT-IR • Range 7200 cm^{-1} – 400 cm^{-1} • UATR accessory with Diamond/ZnSe crystal; range 4200 cm^{-1} – 650 cm^{-1}	Hamilton Building Cocker Teaching Lab	Peter Brien Dr Manuel Ruether
Two Perkin Elmer FT-IR • Range 4200 cm^{-1} – 250 cm^{-1} • UATR accessory with Diamond/ZnSe crystal; range 4200 cm^{-1} – 650 cm^{-1} • Diffusion accessory		

UV-Vis-NIR Spectrometer	Location	Contact/Training
Perkin Elmer Lambda 1050 • Range 175 nm – 3300 nm; double beam • Three detector module • Universal reflectance accessory	SNIAM Instrument room 1 (second floor)	Dr Manuel Ruether
Carry 300 • Range 190 nm - 1100 nm; double beam • 10 position autosampler with variable temperature unit		
Carry 50 • Range 190 nm – 900 nm; single beam	SNIAM Room 2.07	Dr Manuel Ruether Patsy Green (not for training)
Perkin Elmer Lambda 35 • Range 190 nm – 1100 nm; double beam • Variable temperature unit	SNIAM Room 3.22	Dr Manuel Ruether

Raman	Location	Contact/Training
Ntegra Spectra • AFM, STM, Tip enhanced Raman	SNIAM Room 3.08	Prof Georg Duesberg
Raman Spectroscopy and Imaging System	CRANN Room -2.35	
Renishaw inVia Raman Microscope • One laser line 785nm • External probe	Main Chemistry Building, Room 1.1 (extension)	Dr Manuel Ruether

Fluorescence Spectrometer	Location	Contact/Training
Horiba Jobin Yvon Fluorolog • UV-Vis detector (250 - 800 nm) • Liquid nitrogen cooled InGaAs detector (1000 - 1800nm) • Life time measurement capabilities, several laser diodes with different laser lines available • Polarisers • Integrating sphere accessory for quantum yield measurements available • Quartz dewar accessory for measurements at 77K • Cryostat for measurements from 77K to 300K, different holders for liquid and solid samples	SNIAM Instrument room 1 (second floor)	Dr Manuel Ruether
Horiba Jobin Yvon FluoroMax 4 • UV-Vis detector (250 - 800 nm) • Measurements of phosphorescence • Life time measurement capabilities (longer lifetimes) • Integrating sphere accessory for quantum yield measurements available • Quartz dewar accessory for measurements at 77K • Cryostat for measurements from 77K to 300K, different holders for liquid and solid samples	SNIAM Room 2.16	
Perkin Elmer LS55 • UV-Vis detector (200 nm – 900 nm) • Polarisers • Filter wheel • Temperature control unit	SNIAM Room 3.22	
Carry Eclipse • UV-Vis detector 200 nm – 900 nm)	SNIAM Room 2.07	Patsy Green Dr Manuel Ruether

Mass Spectrometer	Location	Contact/Training
Waters LCT Premier (LC and ToF systems)	Main Chemistry Building, Room 0.5	Dr Martin Feeney Dr Gary Hessman
Waters GCT Premier (GC and ToF systems)		
Waters Maldi/ESI-QTOF Premier		
Bruker micrOTOF III	TBSI Room 6.29	

Thermal Analysis	Location	Contact/Training
Perkin Elmer Diamond DSC • Range -30^{0}C – 700^{0}C	Main Chemistry Building, Room 0.5	Dr Manuel Ruether
Perkin Elmer Pyris TGA • Range 25^{0}C to 1000^{0}C; Nitrogen or air purge • TG-IR Hyphenation accessory		

Small Molecule Single Crystal Defractometers	Location	Contact/Training
Rigaku Saturn-724 • Molybdenum source	Main Chemistry Building, Room 0.5	Dr Brendan Twamley
Bruker SMART APEX • Molybdenum source	SNIAM Room 0.24	
Bruker SMART APEX II • Molybdenum source • Copper source • Powder accessory	TBSI Room B2.22	

HPLC	Location	Contact/Training
Varian 920-LC • Analytical / semi preparative • 4 solvent gradient; UV-Vis detector; column oven ; autosampler	Main Chemistry Building Room 0.5	Dr Manuel Ruether
Varian Star • Analytical / semi preparative • 2 solvent gradient; UV-Vis detector	Main Chemistry Building Room 1.4 extension	
Varian Star • Analytical / semi preparative • 2 solvent gradient; UV-Vis diode array detector	TBSI Room 7.40	
Varian Star • Preparative • 2 solvent gradient; UV-Vis detector; sample collector		

AFM	Location	Contact/Training
Nanoman AFM System	CRANN Room -2.24	Prof Valeria Nicolosi
LT-STM • Dedicated low temperature scanning tunneling Microscope for operation at cryogenic temperatures down to 5 Kelvin	CRANN Room -2.32	
VT STM & New Scala SPM Controller • Variable temperature(5k to 700K) scanning tunneling microscope with a scanning probe microscope		
STM1 & Scala SPM control system • Scanning Tunnelling Micrsocope and SPM control system for data acquisition and image processing	CANN Room -2.38	

Miscellaneous	Location	Contact/Training
Zeta Potential	SNIAM Room 2.16	Dr Manuel Ruether
Automated gas sorption analyser	SNIAM Room 2.16a	Prof Wolfgang Schmitt (not for training)
Gravimetric vapour sorption analyser		
Solvent purification system • 4 different solvents (Diethyl ether, Dichloromethane, THF, Diisopropyl amine)	SNIAM Room 3.22	Dr Manuel Ruether
Solvent purification system • 4 different solvents (Diethyl ether, Dichloromethane, THF, Toluene)	TBSI Room 7.21	

Group Equipment	Location	Contact Details
Prof Thorfinnur Gunnlaugsson • Several UV-Vis and Fluorimeters	TBSI Room 7.39	Prof Thorfinnur Gunnlaugsson
Prof Stephen Connon • Several HPLC systems	TBSI Room 7.21 / 7.20	Prof Stephen Connon
Prof Rachel Evans • Spin Coater • Special equipment for optical measurements	SNIAM Room 2.15	Prof Rachel Evans
Prof Wolgang Schmitt • Special equipment for gas sorption analysis	SNIAM Room 2.16a	Prof Wolfgang Schmitt
Prof John Kelly • Special equipment for optical measurements	SNIAM Room 2.17	Prof John Kelly
Prof Michael Lyons • Special equipment for electro chemistry	Main Chemistry Building Room 1.20	Prof Michael Lyons