Supervisor name	Supervisor university	Supervisor email address	Project area or interests
Professor David K. Smith	University of York	david.smith@york.ac.uk	The project area is Supramolecular Gel-Phase Materials. This group is interested in creating self-assembling soft materials with a variety of applications from environmental remediation and catalysis to drug delivery and tissue engineering. Using organic synthesis they create small molecules that are able to assemble into nanostructured multi-component gels, fully explore their behaviour, and then test their potential in a variety of applications.
Professor Victor Chechik	University of York	victor.chechik@york.ac.uk	The project areas will be in supramolecular/nanoparticle chemistry, or in mechanistic free radical chemistry.
Dr David Jones	University College Cork	davidjones@ucc.ie	This group works in the area of asymmetric organophosphorus chemistry and would offer a project working on developing new enantioselective [3,3]-sigmatropic rearrangement reactions.
Dr Deborah Sneddon	University of Sussex	D.Sneddon@sussex.ac.uk	A project can be offered in the design and development of cancer imaging agents.
Dr Alison Parkin	University of York	alison.parkin@york.ac.uk	A project in the electrochemical interrogation of hydrogen producing enzymes (hydrogenases), with the aim of understanding how the electron transfer "wiring" mechanism controls the chemical reactivity at the active site. This would teach the student interdisciplinary skills in protein production as well as enabling them to apply their knowledge of transition metal chemistry, redox reactions and electrochemistry to understand a biological chemistry question. This is an important topic because bio-hydrogen enzymes are applied in industrial catalysis, and also play a vital role in microbial technologies like anaerobic digestion.
Dr Angelo Frei	University of York	angelo.frei@york.ac.uk	The project area would be Exploration of Transition Metal Complexes as Potential Antibiotics. This would involve the synthesis, purification and characterisation of metal-containing compounds and their biological evaluation for their activity against different bacteria. The student will be

			involved in the synthesis of the compounds and be taught how to conduct basic assessment of antibacterial activity of their compounds.
Dr Haitham Hassan	University of Sussex	Haitham.Hassan@sussex.ac.uk	This research group focuses on utilizing DNA-encoded libraries to create focused libraries for identifying hits against various biological targets. This includes creating biocatalytic reactions compatible with DNA and constructing diverse scaffolds for inclusion in the DNA libraries. These synthesised libraries will be screened against biological targets provided by collaborators.
Professor Małgorzata (Gosia) Swadźba-Kwaśny	Queen's University Belfast	m.swadzba-kwasny@qub.ac.uk	This group works with ionic liquids and deep eutectic solvents, particular areas of interest include: fundamental structural studies of the liquid phase (including synchrotron-based techniques), design of Lewis acidic catalysts, recovery of critical metals, electrolyte design for energy storage applications.
Dr John Slattery	University of York	john.slattery@york.ac.uk	This group could offer projects in two areas: 1) Understanding and optimising novel ionic liquid and deep eutectic solvents for catalytic applications. They prepare these liquids in their labs and through detailed measurements (physical properties, X-ray and neutron scattering measurements etc.) aim to understand them better and use this understanding to tune their performance in catalytic systems. 2) The development of novel p-block element compounds for sustainable synthesis and catalysis. They make highly reactive main group systems, for example those in low oxidation states, and probe their structure, bonding and reactivity. A key focus is on the development of more sustainable catalysts based on earth-abundant elements.
Professor Duncan Gregory	University of Glasgow	Duncan.Gregory@glasgow.ac.uk	This group could offer research projects within inorganic functional and energy materials, covering topics from fundamental solid state chemistry (e.g. of non-oxides such as nitrides and chalcogenides) through projects on the synthesis/characterisation

			and properties of metal ion batteries, hydrogen storage materials, thermal storage materials or thermoelectrics to projects on the sustainable synthesis of inorganic materials (such as microwave synthesis and mechanochemical synthesis).
Dr Alex Loch	University of Glasgow	Alex.Loch@glasgow.ac.uk	This group can offer a project in materials chemistry, looking at the formulation of new gels for chemical capture and release.
Dr Dominik Kubicki	University of Birmingham	d.j.kubicki@bham.ac.uk	This group can provide a project in mechanosynthesis of new solar cell materials (metal halide perovskites) and their structural studies by powder X-ray diffraction and solid-state NMR.
Professor Antoine Buchard	University of York	antoine.buchard@york.ac.uk	This group can provide a project in Sugar-derived monomers and polymerisation catalysis. The project will investigate the synthesis of novel bio-derived monomers from abundant natural sugars and their polymerisation to project degradable bio-based polymers.
Professor Andrew Lawrence	University of Edinburgh	a.lawrence@ed.ac.uk	This group would offer a project in the areas of natural product synthesis and asymmetric synthesis.