Research Opportunities at the School of Chemistry

Our School has four core research themes:

- Sustainable Synthesis and Catalysis
- Chemical Biology
- Materials and Interfaces
- Analytical Chemistry

Take a look through the work of the different research groups within each theme. If you are interested in applying for a PhD position, then contact the PI for help with your application!

Sustainable Synthesis and Catalysis

*Catalytic Upgrading of Biorenewables*

Prof. Steve Bull – sdb45@leicester.ac.uk
Synthetic and Catalytic Applications of Earth Abundant Metals

Dr. Fabrizio Ortu – Fabrizio.ortu@leicester.ac.uk

Novel Synthetic Methodology

Dr. Alex Pulis – a.pulis@leicester.ac.uk

Single Atom Catalysts for Fine Chemical Synthesis

Dr. Qun Cao – pc52@leicester.ac.uk
Bioinspired Catalytic Small Molecule Activation

Dr. Sandy Kilpatrick – sandy.kilpatrick@leicester.ac.uk

![Chemical diagram of bimetallic complexes]

Novel Methodology for Fluorination of Organic Small Molecules

Dr. Alison Stuart – alison.stuart@leicester.ac.uk

![Chemical reaction diagram]

Development of Main Group and Transition Metal Catalysts

Dr. Greg Solan – gas8@leicester.ac.uk

![Catalysis diagram]

- High activity
- Highly selective
- More sustainable
- Biodegradable
- Earth abundant
Chemical Biology

**Natural and Artificial Metalloenzymes for Energy Conversion**

Dr. Patricia Rodriguez-Macia – prm28@leicester.ac.uk

**Metallopharmaceuticals**

Dr. Rama Suntharalingam – k.suntharalingam@leicester.ac.uk

**Heterobifunctional Molecules and Chemical Probes**

Dr. James Hodgkinson – jthodgkinson@leicester.ac.uk
**The Chemical Biology of Formaldehyde**

**Dr. Richard Hopkinson** – richard.hopkinson@leicester.ac.uk

**Molecular Glues and Cooperativity in Drug Development**

**Dr. Richard Doveston** – r.g.doveston@leicester.ac.uk

**Fluorescent Chemical Probes**

**Prof. Steve Bull** – sdb45@leicester.ac.uk
Ultrafast Spectroscopy and Mechanism of Metalloenzymes and Materials for Energy Conversion

Dr. Phil Ash – philip.ash@leicester.ac.uk

Frontier Technologies in Spectroscopy, Imaging, Photonics and Microfluidics for Solving Problems at the Life Science Interface

Prof. Andrew Hudson – ah242@leicester.ac.uk
Materials and Interfaces

Electrochemistry for Real-World Applications and Environmental Monitoring

Dr. Jake Yang – my216@leicester.ac.uk

Green Chemistry and Materials Processing

Prof. Andy Abbott – apa1@leicester.ac.uk

Electrochemical Deposition and Dissolution Processes; Surface and Interfacial Structure

Prof. Karl Ryder – ksr7@leicester.ac.uk

Interfacial Analysis and Imaging

Prof. Rob Hillman – arh7@leicester.ac.uk
Analytical Chemistry

**Molecularly Imprinted Polymers for Biosensing and Theranostics**

*Prof. Sergey Piletsky* – sp523@leicester.ac.uk

**Nanotechnology and Spectroscopy based on Superfluid Helium**

*Dr. Shengfu Yang* – sfy1@leicester.ac.uk

**Laser Spectroscopy and Mass Spectrometry of Molecules, Ions and Clusters in Helium Nanodroplets**

*Prof. Andrew Ellis* – andrew.ellis@leicester.ac.uk
Atmospheric Chemistry, Earth Observation Science and Medical Diagnostics

Prof. Paul Monks – p.s.monks@leicester.ac.uk

Novel Functional Materials and Nanomaterials

Dr. Elena Piletska – ep219@leicester.ac.uk