

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

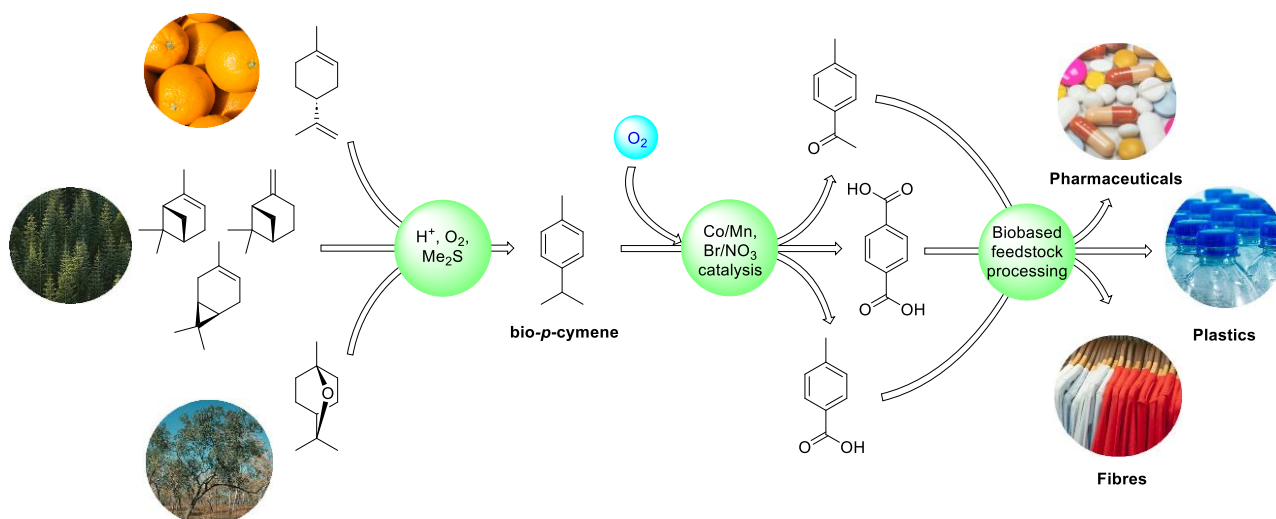
Take a look through the work of the different research groups within each theme. If you are interested in applying for a PhD position, then contact the PI for help with your application!

Sustainable Synthesis and Catalysis



Catalytic Upgrading of Biorenewables

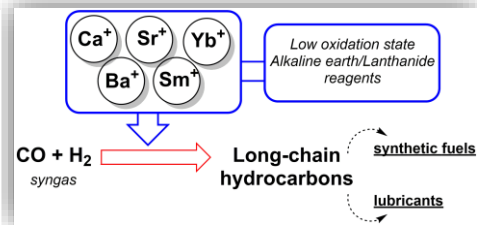
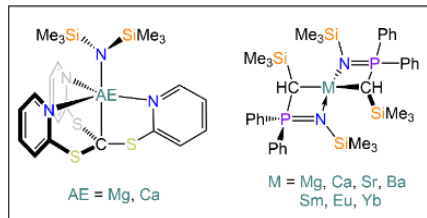
Prof. Steve Bull – sdb45@leicester.ac.uk





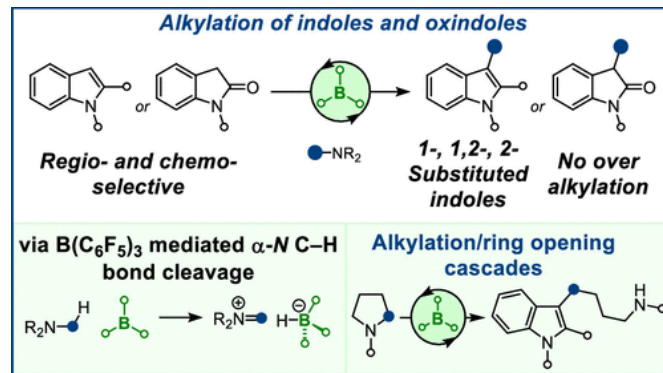
Synthetic and Catalytic Applications of Earth Abundant Metals

[Dr. Fabrizio Ortu](mailto:Fabrizio.ortu@leicester.ac.uk) – Fabrizio.ortu@leicester.ac.uk



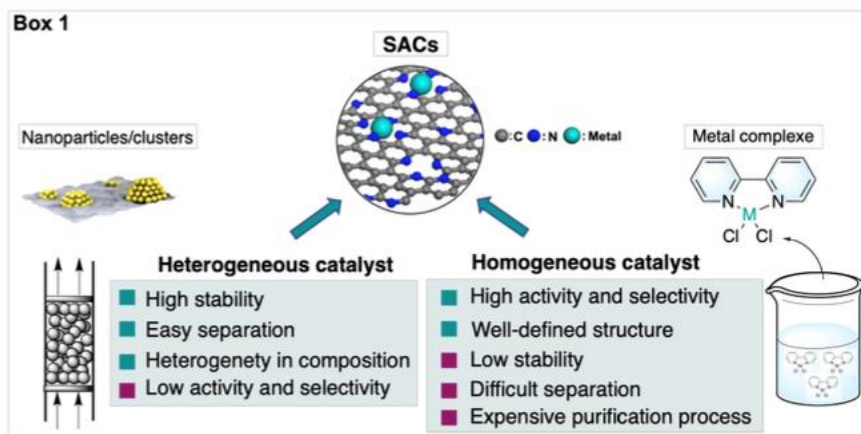
Novel Synthetic Methodology

[Dr. Alex Pulis](mailto:a.pulis@leicester.ac.uk) – a.pulis@leicester.ac.uk



Single Atom Catalysts for Fine Chemical Synthesis

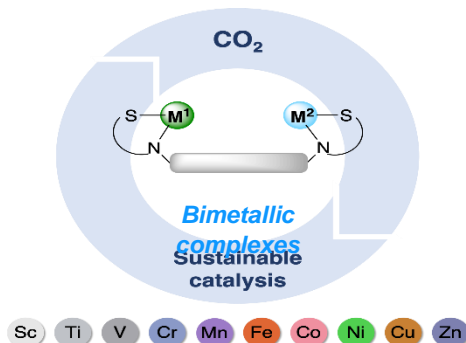
[Dr. Qun Cao](mailto:pc52@leicester.ac.uk) – pc52@leicester.ac.uk





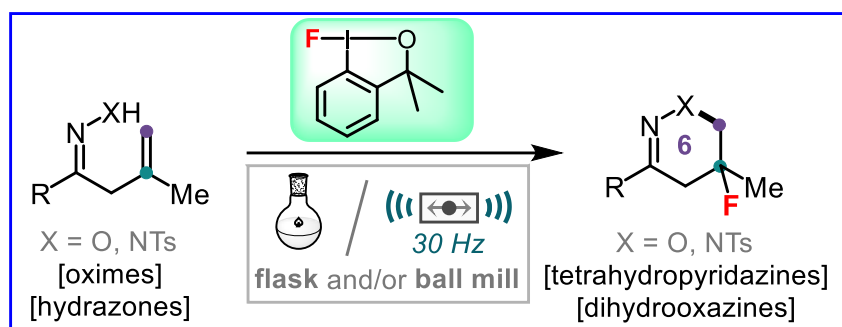
Bioinspired Catalytic Small Molecule Activation

[Dr. Sandy Kilpatrick](mailto:sandy.kilpatrick@leicester.ac.uk) – sandy.kilpatrick@leicester.ac.uk



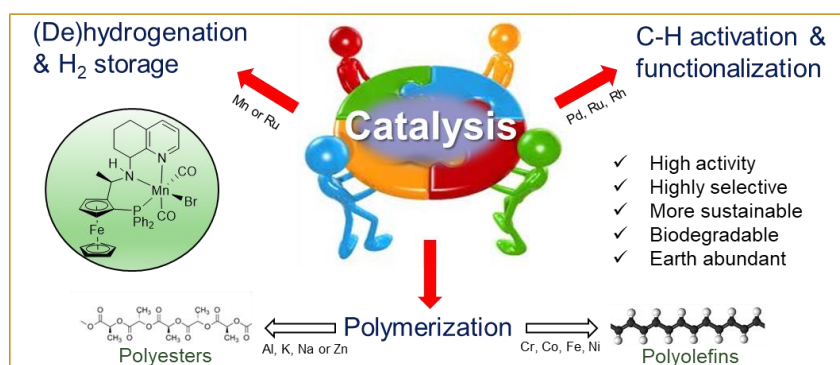
Novel Methodology for Fluorination of Organic Small Molecules

[Dr. Alison Stuart](mailto:alison.stuart@leicester.ac.uk) – alison.stuart@leicester.ac.uk



Development of Main Group and Transition Metal Catalysts

[Dr. Greg Solan](mailto:gas8@leicester.ac.uk) – gas8@leicester.ac.uk

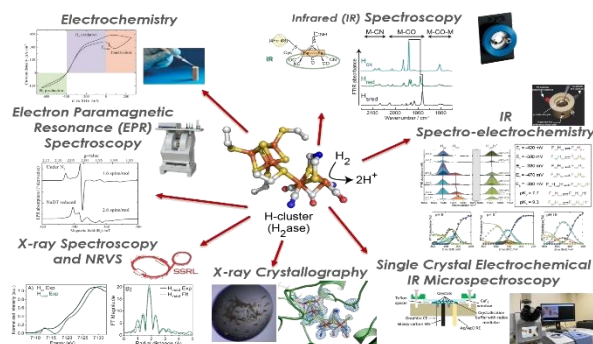


Chemical Biology



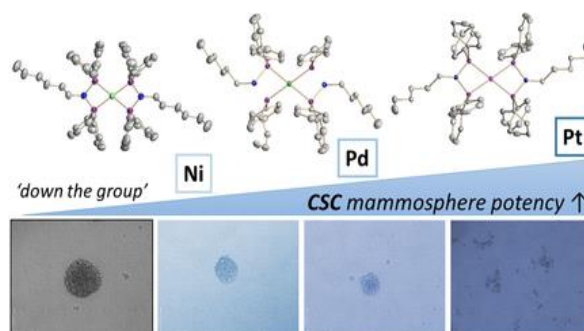
Natural and Artificial Metalloenzymes for Energy Conversion

[Dr. Patricia Rodriguez-Macia](mailto:prm28@leicester.ac.uk) – prm28@leicester.ac.uk



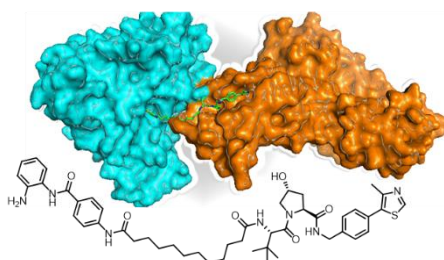
Metallopharmaceuticals

[Dr. Rama Suntharalingam](mailto:k.suntharalingam@leicester.ac.uk) – k.suntharalingam@leicester.ac.uk



Heterobifunctional Molecules and Chemical Probes

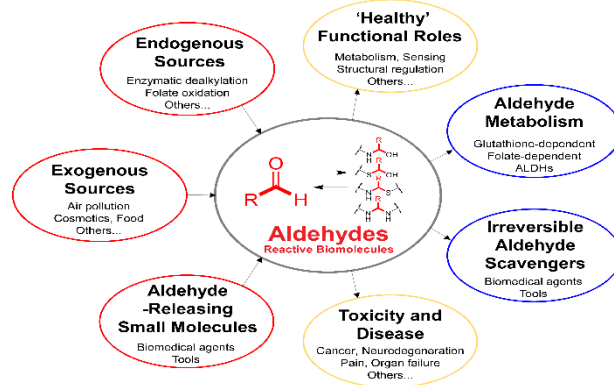
[Dr. James Hodgkinson](mailto:jthodgkinson@leicester.ac.uk) – jthodgkinson@leicester.ac.uk





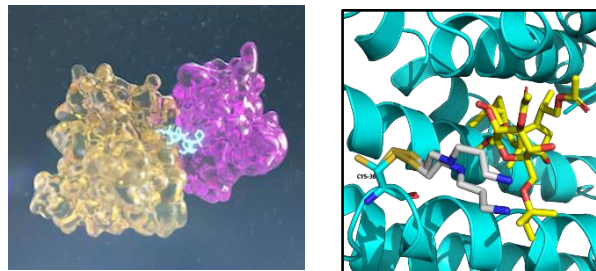
The Chemical Biology of Formaldehyde

[Dr. Richard Hopkinson](mailto:richard.hopkinson@leicester.ac.uk) – richard.hopkinson@leicester.ac.uk



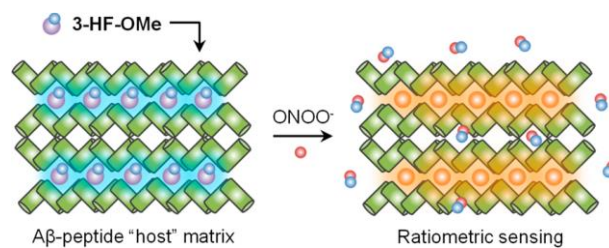
Molecular Glues and Cooperativity in Drug Development

[Dr. Richard Doveston](mailto:r.g.doveston@leicester.ac.uk) – r.g.doveston@leicester.ac.uk



Fluorescent Chemical Probes

[Prof. Steve Bull](mailto:sdb45@leicester.ac.uk) – sdb45@leicester.ac.uk



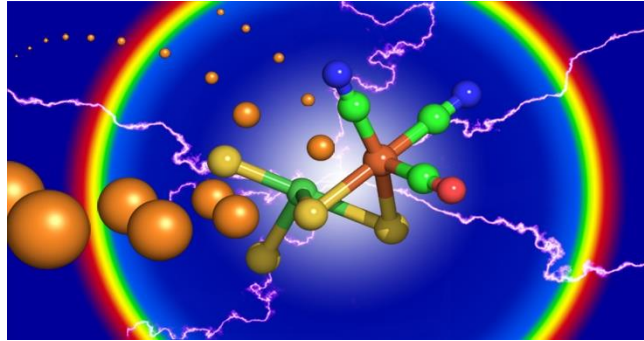


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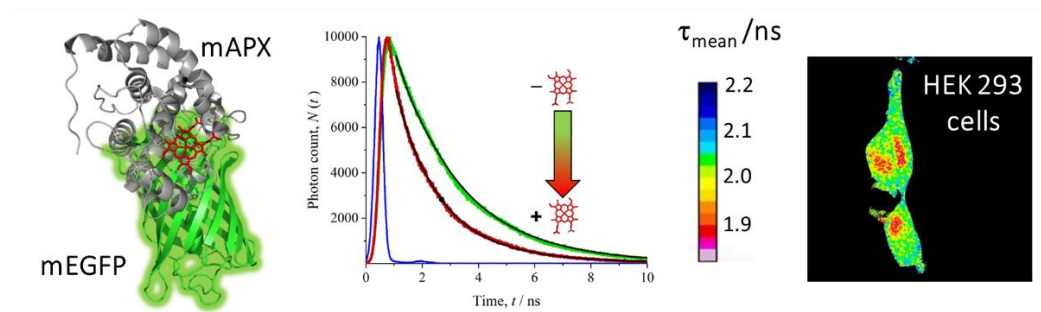
Ultrafast Spectroscopy and Mechanism of Metalloenzymes and Materials for Energy Conversion

[Dr. Phil Ash](mailto:philip.ash@leicester.ac.uk) – philip.ash@leicester.ac.uk



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

[Prof. Andrew Hudson](mailto:ah242@leicester.ac.uk) – ah242@leicester.ac.uk





Materials and Interfaces



Electrochemistry for Real-World Applications and Environmental Monitoring

[Dr. Jake Yang](mailto:my216@leicester.ac.uk) – my216@leicester.ac.uk



Green Chemistry and Materials Processing

[Prof. Andy Abbott](mailto:apa1@leicester.ac.uk) – apa1@leicester.ac.uk



Electrochemical Deposition and Dissolution Processes; Surface and Interfacial Structure

[Prof. Karl Ryder](mailto:ksr7@leicester.ac.uk) – ksr7@leicester.ac.uk



Interfacial Analysis and Imaging

[Prof. Rob Hillman](mailto:arh7@leicester.ac.uk) – arh7@leicester.ac.uk



Analytical Chemistry

Molecularly Imprinted Polymers for Biosensing and Theranostics

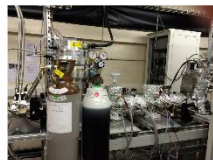


[Prof. Sergey Piletsky](mailto:sp523@leicester.ac.uk) – sp523@leicester.ac.uk

Nanotechnology and Spectroscopy based on Superfluid Helium



[Dr. Shengfu Yang](mailto:sfy1@leicester.ac.uk) – sfy1@leicester.ac.uk

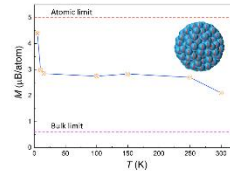


Superfluid helium droplet apparatus

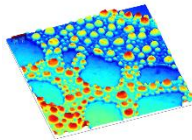
Advantages of helium droplets in nanoscience

- Highly versatile and great degree of control for both nanoparticles and nanowires
- Any vaporizable materials can be used as core
- Each layer can be controlled by partial pressure
- Minimized inter-diffusion between layers
- Soft-landing on deposition target

Ultrahigh-moment Magnetic Nanoparticles

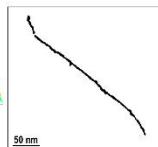


Novel nanoparticles

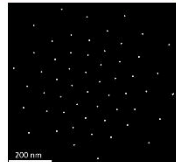


Nanoparticles grown in superfluid helium

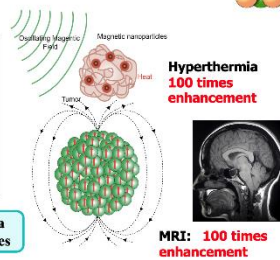
The fantasy of quantized vortices



Nanowire grown in a quantized vortex

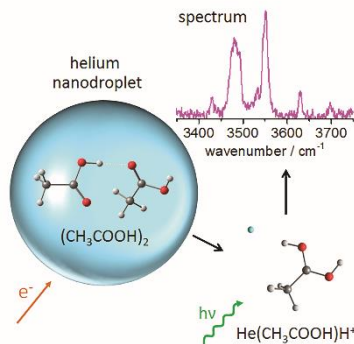


Nanoparticles pinned to a lattice of quantized vortices



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

[Prof. Andrew Ellis](mailto:andrew.ellis@leicester.ac.uk) – andrew.ellis@leicester.ac.uk





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Atmospheric Chemistry, Earth Observation Science and Medical Diagnostics

[Prof. Paul Monks](mailto:p.s.monks@leicester.ac.uk) – p.s.monks@leicester.ac.uk



Novel Functional Materials and Nanomaterials

[Dr. Elena Piletska](mailto:ep219@leicester.ac.uk) – ep219@leicester.ac.uk