

## Funded PhD Position on Electrocatalyst Materials for Carbon Monoxide Conversion

CreissenLab at Keele University in Partnership with Veolia

Waste incineration is a safe and efficient treatment process that enables straightforward energy recovery and valorisation. However, these processes emit large amounts of carbon dioxide, contributing to global warming. To lower the carbon footprint of incineration, the waste sector is considering alternatives to conventional combustion processes with lower CO<sub>2</sub> emissions. These innovative routes can modify flue gas compositions and generate small molecules such as carbon monoxide. Innovative approaches to convert these output gases into valuable products will accelerate the transition towards low-carbon industrial activities. Electrolysis presents an exciting opportunity to meet this challenge by using electricity to convert waste carbon monoxide into carbon-based chemicals that have the potential to defossilise existing production routes.

**The project will develop new catalyst materials to convert waste carbon monoxide into high-value carbon chemicals and fuels.** This will involve materials synthesis and integration in devices to improve performance. Outcomes will be used to establish setups for practical application of carbon monoxide electrolysis in an industrial setting.

For informal enquiries, please contact [c.e.creissen@keele.ac.uk](mailto:c.e.creissen@keele.ac.uk)

For more information on the lab, please visit [www.creissenlab.com](http://www.creissenlab.com)

**Closing Date: 2<sup>nd</sup> of March 2026**

**To be considered for this studentship, you must submit a formal application to Keele University by the 2<sup>nd</sup> of March 2026 using this link**

**Please Quote FNS\_CCreissen\_Feb26 on your application**