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UK and Chinese researchers join forces to tackle air pollution

A workshop bringing together researchers, industry experts and funders from the UK and China in an attempt to find a sustainable replacement to gasoline-powered vehicles has been organised by an academic from Northumbria University, Newcastle.

The three-day event will take place Nanjing University in China and will focus on developing a hydrogen fuel cell which could be used to power electric vehicles – a technology which is still in the early stages of development but which could drastically reduce air pollution across the world if successful.

It has been organised by [Dr.Terence Liu](#) of Northumbria thanks to funding of £44,800 from the British Council, the Newton Fund's Researcher Links scheme and the National Science Foundation (NSF) in China. Early Career Researchers from the UK have now been invited to apply for a place at the workshop, which takes place in September.

Dr Liu, a lecturer within Northumbria's department of [Mechanical & Construction Engineering](#) said: "Rapid industrialisation in countries such as China has resulted in a dramatic rise in air pollution which is having very negative effects on both the health of the population and the environment.

"Producing a new power source with little or no pollution is now a matter of urgency. There is research going on into Polymer Electrolyte Membrane Fuel Cells (PEMFC), which produce electricity with near-zero pollution and have attracted significant attention, particularly for transportation.

"Catalysts play a very important role in these fuel cells, but currently they are made of platinum so are very expensive to produce. The workshop in Nanjing will focus on producing new types of catalysts which are cheaper and more accessible. This will hopefully lead to these fuel cells being more widely used in electric vehicles and other technology."

The workshop also aims to create new links between researchers from China and the UK which it is hoped will lead to further cooperation in catalysis research in the future.

In addition to knowledge exchange between academics, the event will also include sessions designed to connect researchers with industry, venture capital and local government, with the aim of stimulating investment, creating jobs and leading to further technological development.

If successful, the research outcomes of the event could boost the hydrogen economy and contribute to a sustainable energy supply system in both the UK and China.

The workshop is being coordinated by Dr. Terence Liu, of Northumbria and Professor Jianguo Liu of Nanjing University, with contributions from other leading researchers.

The workshop entitled *Low- and Non-Pt Catalysts for Polymer Electrolyte Membrane Fuel Cells*, takes place at the College of Engineering and Applied Sciences, Nanjing University, Nanjing, China from Wednesday 6 to Friday 8 September 2017. Early Career Researchers wishing to apply for a place can do so [here](#). The deadline for application is Friday 30 June.

For more information about Northumbria's department of Mechanical & Construction Engineering and the different courses available please visit <https://www.northumbria.ac.uk/about-us/academic-departments/mechanical-and-construction-engineering/> or come along to one of Northumbria's [Open Days](#).

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