

# New research could help cars kick the fossil fuel habit

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Researchers at the University of Bath are helping to develop new rechargeable batteries that could improve hybrid electric cars in the future. Transport is a major energy user and is estimated to be responsible for around 25% of the UK's total carbon emissions. As concern grows about climate change, a range of 'green technologies' are being developed to help reduce carbon emissions.

Hybrid petrol/electric cars that use conventional metal-hydride batteries are already available but they are heavy and the cars have limited power.

Professor Saiful Islam, of the Department of Chemistry at the University of Bath, is researching new materials to use in rechargeable lithium batteries, similar to those that have helped to power the worldwide 'portable revolution' in mobile phones, laptops and MP3 players. For hybrid cars, new materials are crucial to make the batteries lighter, safer and more efficient in storing energy.

Professor Islam's research, which recently won the Fuel Cell Science & Technology Award from the Royal Society of Chemistry, will be presented at the Sustainable Energy and the Environment research showcase on Wednesday 17 September at the University of Bath, alongside other cutting-edge research from across the region.

"Hybrid electric cars such as the Toyota Prius rely on petrol engines, with their batteries being charged by the waste energy from braking. These cars provide better fuel economy for urban driving than a

conventional car," explained Professor Islam.

"Developing new materials holds the key to lighter and more efficient rechargeable batteries for hybrid electric cars, reducing our use of fossil fuels and cutting carbon emissions."

The showcase will be opened by David Willetts MP, Shadow Secretary of State for Innovation, Universities and Skills, and will be attended by key industrialists, research councils, local and national government officials and other key stakeholders from across the South West.

The exhibition also coincides with the launch of the new Institute for Sustainable Energy and the Environment (I-SEE) at the University of Bath. This will bring together experts from diverse fields of science, engineering, social policy and economics to tackle the problems posed by global warming.

Professor Islam added: "I-SEE reflects the growing focus on 'green technology' at the University, which is a major centre for sustainable energy and chemical research."

The showcase event on 17 September will also feature exhibitions from other researchers from the University on subjects such as affordable solar cells and hydrogen fuel production.

Source: University of Bath

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