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SINGAPORE

NTU and German scientists win award for electric car motor

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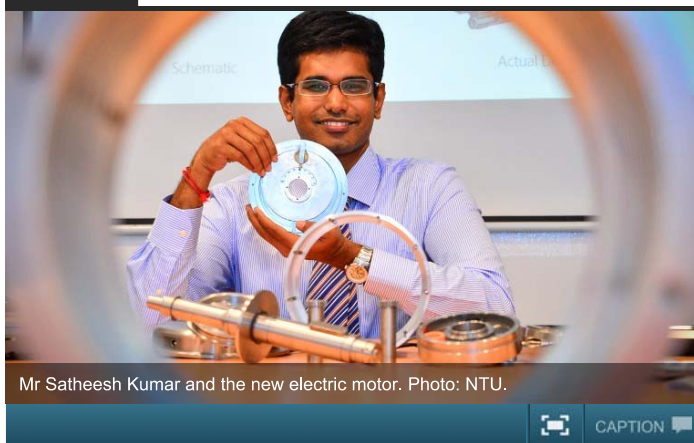


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The engine integrates the traditional electric motor with the air-conditioner's compressor, which is typically separated. The new design saves space and allows the use of bigger batteries, which can in turn increase the range of electric vehicles by 15 to 20 per cent.

PHOTOS



SINGAPORE: Scientists from Nanyang Technological University (NTU) and the German Aerospace Centre (DLR) have invented a two-in-one electric motor which increases the range of electric vehicles by as much as a fifth, the university announced in a media release on Tuesday (Sep 30).

The engine integrates the traditional electric motor with the air-conditioner's compressor, which is typically separated. The new design saves space and allows the use of bigger batteries, which can in turn increase the range of electric vehicles by 15 to 20 per cent, NTU said.

In addition, the invention allows the electric motor to be more efficient in powering the car's wheels, while the air-conditioner's compressor will use less power due to synergy between the engine and the compressor. The compressor can also utilise energy regenerated directly from the car's brakes.

Prof Subodh Mhaisalkar, Executive Director of the Energy Research Institute @ NTU (ERI@N), said: "The biggest challenge with electric cars in tropical megacities is the range that they can travel on a full-

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NTU and German scientists win award for electric car motor - Channel NewsAsia

charge, because their batteries are needed to power both the engine and the air-conditioning. In tropical countries like Singapore, up to half the battery's capacity is used to power the air-conditioning system."

Research scholar Satheesh Kumar from ERI@N, who worked on the invention, said his motor challenges conventional designs which date back to the 1960s, when air-conditioning first became popular.

To top it all off, the new motor is expected to cost less to produce as it requires less material than its counterparts.

The joint-invention recently won the Best Originality Award in the TECO Green Tech International Contest in Taiwan, which saw 19 entries from universities including Boston University and University of California (UCLA).

NTU said its partner, DLR, will conduct further tests and improvements to the new engine. It aims to eventually commercialise the product.

- CNA/dl