

Fly Wheel - The flywheel storage for electric vehicles

Sources:

CMO - Clean Motion Offensive
Industriemagazin Verlag GmbH

Section:

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Institution:

Technical University Graz
Automobil-Cluster Upper Austria

Ort: Linz, Austria

Descriptom:

Graz University of Technology is working together on a mass-produced flywheel accumulator for electric and hybrid vehicles within the scope of the CMO (Clean Motion Offensive) project, initiated by the Upper Austrian Automobile Cluster. The so-called "Fly Wheel" saves the energy released during braking at short notice and makes it available again during acceleration. The special feature of this development is that the small and compact energy storage unit is manufactured from cheaply available material and achieves a long service life despite the high mechanical and electrical stress. The Fly Wheel is ideally suited for use in individual traffic due to its power density.

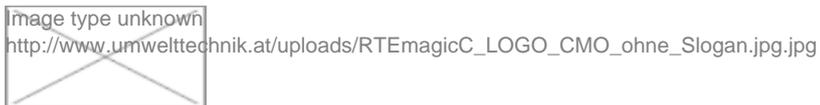
By providing this highly efficient intermediate storage, the energy consumption of electrified vehicles can be reduced. The inclusion of the short-time power peaks by the flywheel accumulator leads to an increase in the service life of the battery systems used, which is particularly useful in electric vehicles with relatively small battery capacities.

This "boost function" relieves the battery system and increases the range especially in stop-and-go traffic.

The main focus of this project is the optimization of the mechanical load capacity and reduction of the losses of the integrated rotor and the bearings, the optimization of the motor and the generator as well as its required power electronics (efficiency, control).

The concept of the Fly Wheels and the construction of prototypes are developed and carried out by Graz University of Technology. The technology is comprehensively tested in a test vehicle in order to gain insights into the practicality of the flywheel memory.

Further Information: [Cleanmotion](#)



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