

Aug. 2018

RECENT

PROJECT

Development of Electric Vehicles with Body-Integrated Super-Capacitor Energy Storage System

Funding source: Innovation and Technology Fund

Funding amount: \$4.2 Million



Project News

We have recently completed the project for the next generation of electric vehicle. The project is to investigate and develop the super-capacitor (SC) energy storage system integrated with EV's body. It improves performances of the battery energy storage system and the hybrid battery-capacitor energy storage system, such as instantly supplying high power to EV's motor and instantly absorbing high feedback power, improving system efficiency, quicker charge, more safety and minimum space. The development of the project includes the system structure that consists of the super-capacitor and battery energy storage system, the super-capacitor and battery management system, the vehicular control unit and motor drive system, the integration of the super-capacitor energy storage system with the vehicular body, integration of the above whole electrical system in a light EV prototype.

We have recently an award from FITMI Hong Kong innovative Technology Achievement 2017.



•Technologies and Features of the Research Development:

- Body-integrated super-capacitor (BISC) package
- Super-capacitor management system (SCMS) and battery management system (BMS)
- Monitor, manage, and maintain SC and battery operation, provide the warning indications to any faults, and protect safe operation of BISC and battery
- Topology structure of electric system in EV
- Model and simulation of EV system including SC, battery, motor drive, and car
- Energy control strategy of hybrid energy system
- Applicable to electric vehicles

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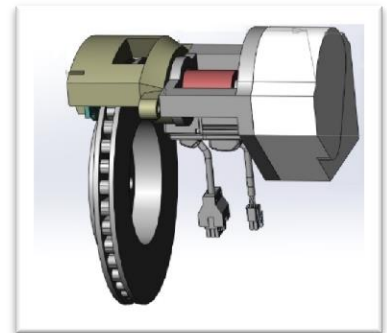
IN PROGRESS

The Development and Application of All Electric Intelligent Anti-lock Braking System for Electric Vehicles

PROJECT

Funding source: Innovation and Technology Fund
Funding amount: \$2.2 Million

Project News



We have recently awarded with a new project form Innovative and Technology Fund. The project is to develop the next generation of anti-lock braking systems (ABS) for vehicles using all electric drive method. In the past, the ABS is mainly using mechanical based with hydraulic systems that has not been improved for last many years. The new proposed method is using all power electronics based.

•Technologies and Features of the Research Development:

- Electromagnetic disk brake
- All electric anti-lock braking system (ABS)
- Intelligent ABS control
- No pedal vibration in ABS operation
- Individual adjustable pedal module
- No flammable fluids
- Simplification of braking equipment, reduction of complexity and quantity of components
- Applicable to electric vehicles or conventional ICE vehicles

CONTACT US FOR MORE DETAILS

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