

FLYWHEEL SYSTEM FOR EFFECTIVE BATTERY ENERGY STORAGE AND POWER

Tech ID: 24179 / UC Case 2014-183-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,112,491	10/30/2018	2014-183

BRIEF DESCRIPTION

In recent years there has been a greater interest in making more energy efficient automobiles. A number of plug-in vehicles (PEVs) or hybrid electric vehicles (HEVs) are offered by nearly every automaker today. Although these vehicles offer a cleaner and more energy efficient alternative to traditional petroleum-fueled vehicles, mainstream consumer acceptance of these technologies is stymied by considerations of their premium price, limited travel range, and extended charging times, all consequences of current battery technologies.

To address these problems, UC Berkeley researchers have developed an electro-mechanical flywheel system to be incorporated into PEVs and HEVs which increases efficiency, extends battery life and extends travel range making this battery/flywheel system more cost effective and more appealing to the mainstream consumer. The system combines the chemical energy storage in a battery with the electro-mechanical energy storage in a flywheel to provide the system with both high power capability and high energy density.

SUGGESTED USES

- » Used in PEVs and HEVs to increase the ability of the vehicles to capture braking energy during braking
- » Battery management system (i.e., can limit the charge/discharge rate of the battery)

ADVANTAGES

- » Able to extend battery life while still preserving high power capability

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OTHER INFORMATION

CATEGORIZED AS

- » **Energy**
- » Storage/Battery
- » **Transportation**
- » Automotive

RELATED CASES

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