

ABSTRACT

Automotive Hybrid Energy Supply System and Method and Hybrid Energy Automobile

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The present invention discloses an automotive hybrid energy supply system and method. The system comprises a solar cell module, a storage battery module, an input conversion module, a DC-AC inverter, a traction motor, a flywheel module, and a control module; when an automobile operates, the flywheel module provides driving power to the automobile; the control module acquires an operating state of the automobile, output parameters of the flywheel module, and SOC of the solar cell module and the storage battery module, and determines the maximum power that can be provided by the flywheel module according to the output parameters, and when the maximum power output by the flywheel module is less than the driving power required by the automobile, the input conversion module is controlled to switch the DC power output by the solar cell module and/or the storage battery module into the DC-AC inverter; and the DC-AC inverter converts the DC power into AC power to drive the traction motor. The present invention can reduce the pollution of the automobile to the environment, increase use efficiency of the energy, and increase the cruising range of the automobile.

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Figure 1