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(54) **METHOD AND APPARATUS FOR BATTERY ENERGY RECOVERY, BATTERY MANAGEMENT SYSTEM, AND BATTERY**

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(57) **ABSTRACT**

This application relates to the field of battery technologies and discloses a method and an apparatus for battery energy recovery, a battery management system, and a battery. The method includes: sending a charge/discharge instruction to a battery pack, so that the battery pack alternately outputs a charge signal and a discharge signal according to the charge signal when a vehicle is traveling; and performing battery energy recovery for the vehicle according to the charge signal. In the method and the apparatus for battery energy recovery, the battery management system, and the battery in this application, the charge signal and the discharge signal are alternately output so as to perform battery energy recovery under a condition corresponding to the charge instruction. In this way, endurance mileage of the vehicle is effectively increased and degradation speed of the battery is reduced.