

Electronics and ICT

 Title

Energy Recycling System And Method For Discarded Lithium-ion Batteries

Abstract

The power recovery system of this technology includes a balance logic module, a first energy storage device, and a control circuit, wherein the first energy storage device includes several supercapacitors. In this power recovery method, several used lithium-ion batteries are first received. Then, the first stage of the discharge operation is carried out to control the discharge of the waste battery to the supercapacitor. Then, a second-stage discharge operation is performed to control the discharge of the supercapacitor to the second energy storage device. After the waste lithium-ion battery is discharged, a battery relaxation operation can be performed to relax the discharged waste lithium-ion battery for a preset period of time, so that the voltage of the discharged waste lithium-ion battery can recover for the next discharge.

Benefits

When the power of the battery lithium-ion battery is too low to provide the power required by the corresponding electronic device, it cannot continue to be used. However, before the materials of these Li-ion batteries are recycled, these Li-ion batteries also contain residual energy that can be used for recycling. Most of today's lithium-ion batteries are not recycled for the remaining power in them before they are discarded. Therefore, need a kind of electric energy recovery system and the electric energy recovery method of waste lithium-ion batteries to reclaim the residual energy of these lithium-ion batteries. This technology proposes a power recovery system and power recovery method for waste lithium-ion batteries, which can efficiently recover the residual energy of lithium-ion batteries.

Industry Categories

Battery industry, waste treatment industry.

Keywords

Discarded Li-ion battery, Residual energy, Self- adaptive pulse discharge method, State of charge, State of Health

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