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(54) VOLTAGE GRADIENT-BIASED CONTROLLER, SYSTEM AND METHOD FOR CONTROLLING DISCHARGE OF HETEROGENEOUS BATTERY PACKS

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(57)ABSTRACT

A controller, a system including such a controller, and a method for controlling discharging of a plurality of battery packs are provided. The controller includes one or more processor and at least one tangible, non-transitory machine readable medium encoded with one or more programs configured to perform steps to minimize a corresponding voltage gradient versus charge of each battery pack to be below a predetermined threshold, and calculate a respective discharging share of each battery pack based on the charge and the voltage in an updated curve of voltage versus charge of each battery pack and the total power demand. The controller provides signals with instructions to the plurality of battery packs and/or the one or more power converters for discharging power from the plurality of battery packs based on the respective discharging share of each battery pack and/or keeping a certain battery pack idle.

