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(19) **United States**(12) **Patent Application Publication**  
**CHETTIAR et al.**(10) **Pub. No.: US 2022/0368139 A1**(43) **Pub. Date: Nov. 17, 2022**(54) **ENERGY STORAGE SYSTEM AND METHOD  
TO IMPROVE BATTERY PERFORMANCE  
BASED ON BATTERY CONNECTIONS****Publication Classification**(51) **Int. Cl.**  
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Sep. 18, 2019, now Pat. No. 11,398,735.(60) Provisional application No. 62/740,546, filed on Oct.  
3, 2018.(57) **ABSTRACT**

A battery system and method may be shown and described. Two or more batteries may be connected in an identical configuration to an output device. The batteries may be controlled by a control unit or logic chip which may be configured to operate in two phases. In the first phase, the two or more batteries may be connected in series. In the second phase, the two or more batteries may be connected in parallel. Switches may be connected to the positive and negative terminals of the batteries to switch the configuration from series to parallel, and vice-versa. A control unit may switch between the two phases at any desirable frequency to produce a desired output voltage and amperage. The switching speed between the two phases may be any number of rotations per second.

