

After the introduction section, UC and battery energy storage technologies for EV and their main developing trends are described in Section "The battery and UC energy storage technologies". Ultra-capacitor/battery hybrid energy storage solutions are presented in Section "Ultra-capacitor/battery hybrid energy storage solutions". Key ...

Based on a review of 20 relevant life cycle assessment studies for different flow battery systems, published between 1999 and 2021, this contribution explored relevant methodological choices ...

This paper proposes the use of existing LCA information for established energy storage technology (i.e. capacitors and lithium-ion batteries) to derive environmentally based performance goals for future technologies. In using this approach, goals become being at least as good as, if not better, for the environment than the contemporary ...

We investigate the environmental impacts of on-board (based on alternating current, AC) and off-board (based on direct current, DC) charging concepts for electric vehicles using Life Cycle ...

The goal of this study is to assess the environmental performances of two types of aluminum electrolytic capacitors, namely "Type 1" and "Type 2". The two capacitors differ for the ...

Nowadays, the energy storage systems based on lithium-ion batteries, fuel cells (FCs) and super capacitors (SCs) are playing a key role in several applications such as power generation, electric vehicles, computers, house-hold, wireless charging and industrial drives systems. Moreover, lithium-ion batteries and FCs are superior in terms of high energy density ...

A cradle-to-gate life cycle assessment (LCA) was performed to evaluate the environmental impact of 38 types of AECs in a product family from the manufacturer's perspective. In the study, 100,000 AECs with specific rated working voltage (among 16 V, 25 V, and 35 V) and rated capacitance (among 4.7 to 6800 uF) produced by a ...

The Life Cycle Assessment (LCA) methodology which allows quantification of environmental performance of products and processes based on complete product life cycle was...

Web: <https://roomme.pt>