

With the pervasiveness of electric vehicles and an increased demand for fast charging, stationary high-power fast-charging is becoming more widespread, especially for the ...

Wu et al. [41] investigated the solar energy storage capacity of an energy pile-based bridge de-icing system with the bridge deck embedded with thermal pipes severing as ...

the PV and storage integrated fast charging stations. The battery for energy storage, DC charging piles, and PV comprise its three main components. These three parts form a ...

The simulation results of this paper show that: (1) Enough output power can be provided to meet the design and use requirements of the energy-storage charging pile; (2) the ...

Storage energy density is the energy accumulated per unit volume or mass, and power density is the energy transfer rate per unit volume or mass. ... Variable-speed drives can also be used to ...

Thermal Energy Storage Equipment Xiaolin Zhu<sup>1,a</sup>, Zhifeng Wang<sup>1,b</sup> Shidong Li <sup>2,c</sup> ... heat of water, are limited within small range of heat storage capacity and heat charge power, a long ...

The thermal performance of precast high-strength concrete (PHC) energy piles has been investigated [7]. Improving the thermophysical properties of the backfill materials is ...

Energy geo-storage requires the need to develop energy storage systems with different scales (i.e., residential-scale, building-scale, community-scale, city-scale). In many of ...

This paper introduces a high power, high efficiency, wide voltage output, and high power factor DC charging pile for new energy electric vehicles, which can be connected ... (3) The AC ...

Numerical simulations are conducted to investigate the utilisation of PCM energy screw piles on reducing fluid and ground temperatures, considering different constituents in ...

In this paper, three battery energy storage system (BESS) integration methods--the AC bus, each charging pile, or DC bus--are considered for the suppression of ...

At present, renewable energy sources (RESs) and electric vehicles (EVs) are presented as viable solutions to reduce operation costs and lessen the negative environmental ...

combines ground charging devices and energy storage technology. Based on the existing operating mode of a tram on a certain line, this study examines the combination of ground ...

Accordingly, this study uses numerical simulations to understand how the thermal energy storage in energy pile arrays in shallow unsaturated soil profiles can take ...

In this study, to develop a benefit-allocation model, in-depth analysis of a distributed photovoltaic-power-generation carport and energy-storage charging-pile project ...

In recent years, energy piles have been attracting attention from the academic field and getting more installations in engineering practice [7], [8], [9].The energy piles ...

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