

What is a charging pile?

Serving as a core component in the era of electrified transportation, charging piles provide essential fast-charging services for new energy vehicles, thereby ensuring that daily travel needs are adequately met.

Are smart charging piles sustainable?

This study contributes a sustainable framework for the development and design of smart charging piles and related products, further promoting the adoption of green design principles and symmetry design concepts within the supporting infrastructure of new energy vehicles.

How to identify the main charging pile design features?

By ranking the weights of the product design features, the main charging pile design features can be better identified in order to focus on the core design features in the subsequent design practice, so as to design a product that meets the users' needs. 3.4. Analysis of Product Sustainability Factors Based on the TBL Approach

Which design features should be prioritized in subsequent charging piles?

The results indicate that a compact size (D3), lightweight materials (D6), a cable-reeling device (D8), clear storage guidelines (D9), a high-power charging module (D15), and heat dissipation structures and materials (D16) should be prioritized as the main design features in subsequent charging piles.

How can PSO-RF improve charging pile design?

The application of PSO-RF can assist designers in incorporating sustainability elements into various design features during the early design stage, thereby improving charging pile design.

Why is integrated design important for smart charging piles?

This integrated approach effectively promotes the harmonization of users' needs and product sustainability, contributing to the successful design of smart charging piles. Furthermore, it supports the sustainable development and innovation of the charging pile industry.

The utility model provides a solar charging pile and a system, which comprises a charging pile body, a solar panel arranged above the charging pile body, a control device arranged inside the charging pile body and an energy storage unit; the control device comprises a controller, an inverter, a voltage stabilizing loop, a wireless module and a power supply loop; the output end ...

The invention discloses a solar charging pile, which comprises: mobile device, rotary device, fill electric pile body, solar power system. The mobile device includes: the device comprises a movable bearing plate, a main driving mechanism and a steering mechanism; the main drive mechanism includes: the main driving support, the main driving wheel, the worm and the main ...

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The invention relates to the field of charging of new energy automobiles, in particular to a solar charging pile, which comprises a charging pile main body, wherein a storage battery...

The utility model discloses a solar charging pile for new energy automobile, including filling the electric pile body, fill electric pile body top welding and have the decking, the decking top is provided with photovoltaic mechanism, photovoltaic mechanism is fixed with the stand at the decking top, is fixed with solid fixed ring on the stand, and solid fixed ring circumference outer ...

The utility model discloses a novel solar charging pile, including the pile body, the mounting groove has been seted up to the pile body side, this novel solar charging pile can drive solar cell panel through installing in the slope unit on fixed plate surface and carry out the angle slope, and then can make solar cell panel and sunshine's area of contact adjust according to actual ...

The invention provides a movable solar charging pile, relates to the technical field of solar energy, and comprises a main rod and a leisure device.

The special charging pile is the charging pile used by the construction unit (enterprise)'s own parking lot (garage) for the internal personnel of the unit (enterprise). The self-use charging pile is a charging pile built in an ...

The utility model relates to a solar charging pile, which comprises a charging box, a plug, a bracket and a solar power generation device, wherein the charging box is arranged on the bracket, a storage battery is arranged in the charging box, and the plug is electrically connected with the storage battery; the bracket is provided with an accommodating cavity with an ...

The invention relates to a solar charging pile, which comprises a pile body and a slot, wherein two limiting plates are vertically arranged on the pile body and form a limiting cavity; an expansion device is arranged in the limiting cavity; the upper end of the expansion device is connected with two solar panels; the two solar panels are hinged together; one of the limiting plates is ...

Use of triple-junction solar cell with stacks of thin-film silicon solar cells (a-Si:H/a-Si:H/uc-Si:H) to charge an $\text{Li}_4\text{Ti}_5\text{O}_{12}/\text{LiFePO}_4$ LIB was investigated by Agbo et al. 4 The triple-junction solar cell had a short-circuit current density (J_{SC}) of 2.0 mA cm^{-2} and open-circuit voltage (V_{OC}) of 2.09 V under attenuated illumination of 37.4 mW cm^{-2} , which ...

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