Smart light-chasing solar power generation

This research paper presents the development of an autonomous photovoltaic street lighting system featuring intelligent control through a smart relay. The system integrates essential components ...

This design proposes a two axis solar tracking system based on the Internet of Things cloud platform. This system uses the sun viewing motion tracking method to drive photovoltaic panels in horizontal and vertical ...

The aim of this paper is to introduce the solar auto tracking to the existing fixed solar panels, thus we are maintaining the constant maximum power output. Thus by using this tracking system we can increase the ...

This project adopts an advanced microcontroller as the core control unit, which accurately commands the servo drive, realizes the real-time light chasing and charging function of the solar panel, and ...

Our sun-tracking solar street light uses advanced sun-tracking technology to maximize solar energy absorption, providing long-lasting, eco-friendly illumination for roads, pathways, parks, and other outdoor areas.

In this paper, the photoelectric method is used to track the position of the sun, the control process is modeled and simulated in the system. The system is optimally controlled by adding a Kalman filter to the output of ...

This product is a small maker project, a demonstration model, and cannot be used for power generation or waterproofing. It is only for research, learning, and entertainment purposes.

This design utilizes a light-dependent resistor (LDR) and an STM32 microcontroller to work together for real-time solar tracking, optimizing solar energy captur

Its unique light-chasing algorithm enables the solar panel to continuously track the light source from sunrise to sunset, thus significantly improving the charging efficiency.

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This project proposes the design of automatic cleaning function and automatic light source tracking system for solar street lamps.

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