

Wind-resistant solar-powered container for highways





Overview

In this paper, a portable wind-photovoltaic power generation system (WPPGS) based on the foldable umbrella mechanism is presented. The proposed WPPGS is installed in the medians of highways, and it ca.

Is there a portable wind-photovoltaic power generation system for highways?

In this paper, we propose a portable wind-photovoltaic power generation system based on the foldable umbrella mechanism for applications on highways. The proposed WPPGS is installed in the median of the highway, which can simultaneously capture the solar energy and wind energy produced by running vehicles.

Can a hybrid wind turbine harvest energy from moving vehicles?

As the energy generates from wind flow in both directions, we used this concept to model a novel hybrid wind turbine to demonstrate energy harvesting viability in a controlled way entirely from the moving vehicles on highways, with a three-bladed wind turbine and a solar tracking system.

Can wind-solar energy be used for street lighting?

Georges proposed a new power approach for street lighting based on the hybrid wind-solar energy system (Georges and Slaoui, 2011). Qiao investigated a wind-solar generation system for road electrical facilities such as traffic signal light (Qiao et al., 2011).

Can a vertical-axis wind turbine be used on highways?

Tian proposed an approach to harvest energy from the wakes of moving mobilities on highways based on a vertical-axis wind turbine (Tian et al., 2017) proposed wind turbine could adapt to the two-way wind from the two-way lane, and its average power was 139.60 W.



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