

Deep offshore high-power wind turbines and diversified application scenarios pose an urgent need for innovative wind power technologies.

Renewables, including solar, wind, hydropower, biofuels and others, are at the centre of the transition to less carbon-intensive and more sustainable energy systems. Generation capacity has grown rapidly ...

Abstract: Wind energy has emerged as a prominent renewable energy source, offering a sustainable alternative to fossil fuels. This review article provides a comprehensive overview of the current state ...

The innovation of wind power generation technology is not limited to traditional power production, but continuously expands the application field, integrates wind energy into multiple ...

In this Review, we first present the achievements of wind energy development over the past three decades.

The review comprehensively examines hybrid renewable energy systems that combine solar and wind energy technologies, focusing on their current challenges, opportunities, and policy ...

Integrating wind power with energy storage technologies is crucial for frequency regulation in modern power systems, ensuring the reliable and cost-effective operation of power ...

By employing MPC-LSTM-KAN in the control strategy, the system is better equipped to handle the inherent uncertainties and dynamic conditions of renewable energy generation.

To address complex nonlinearities in the system, the KAN is utilized to model and approximate these dynamics, refining the LSTM predictions. The integration of these advanced ...

Wind power or wind energy is a form of renewable energy that harnesses the power of the wind to generate electricity. It involves using wind turbines to convert the turning motion of blades, ...

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