

Design of multi-purpose solar power generation system

The aim of this study is to design and develop a hybrid wind and solar energy generation which can increase the electrical energy's efficiency by using the wind turbine and ...

The objective of this study is to present a comprehensive review of wind-solar HRES from the perspectives of power architectures, mathematical modeling, power electronic ...

optimization of solar-thermal photovoltaic hybrid power generation system and other similar multi-objective optimization problems. This work was supported by research on key technologies of ...

(a) Simple schematic diagram for the proposed solar PV-WT dual power generation system, (b) isometric view of the complete system structure, and (c) Multiview drawing with complete ...

The efficiency (η_{PV}) of a solar PV system, indicating the ratio of converted solar energy into electrical energy, can be calculated using equation [10]: $\eta_{PV} = P_{max} / P_{inc}$...

Solar-aided coal-fired power generation (SAPG) has been attracting more and more attentions in recent years. However, the multi-objective optimization of SAPG system considering off ...

This paper proposes a model called X-LSTM-EO, which integrates explainable artificial intelligence (XAI), long short-term memory (LSTM), and equilibrium optimizer (EO) to reliably forecast solar power ...

Among the existing CSP technologies, solar power tower (SPT) technology holds remarkable competitiveness due to its potential for achieving high power cycle efficiency [6] ...

Among those varieties of solar energy utilizations, the solar power tower (SPT) system is one of the highest potential forms for power generation. It is capable to incorporate ...



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