
To improve the anti-interference performance and reduce the output current harmonic content of the grid-connected inverter, an improved control strategy that combined repetitive control (RC) ...

In this article, I first model the LCL-type grid-connected solar inverter system, then design the improved LADRC controller, and analyze its performance in terms of disturbance ...

One of the highlights of this strategy is the improved disturbance rejection capability of the current controller, achieved through capacitor voltage decoupling. This ...

To address these challenges, this study introduces a novel dual-loop control strategy based on linear active disturbance rejection control (LADRC), wherein voltage loop is ...

Effective Inverter control is vital for optimizing PV power usage, especially in off-grid applications. Proper inverter management in grid-connected PV systems ensures the stability ...

This paper presents an active disturbance rejection control (ADRC) approach for three-phase four-legs voltage source inverters (FL-VSIs) in a standalone renewable energy ...

This paper designs a power-frequency controller for grid-forming distributed photovoltaic systems by integrating LADRC and VSG control, aiming to enhance system ...

In order to solve the control problem caused by the disturbance of external environment and the perturbation of internal parameters in the isolated island operation mode ...

The advanced first-order self-disturbance rejection control design focuses on robust disturbance rejection and efficient parameter tuning, providing a promising solution for ...

Abstract: The integration of photovoltaic (PV) systems with the grid connected four-leg voltage source inverters (4LVSI) offers more efficient power conversion and distribution.

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