

# **Building a 12V/220V DC/AC and 220V/12V AC/DC converter with 500W power for use in an uninterruptible power supply system.**

**Đặng Tồn Nhậ**

**Abstract:** The research aims to meet the demand for integrating solar energy into traditional uninterruptible power supply systems. The project focuses on building and deploying a 12V/220V DC/AC and 220V/12V AC/DC converter with a power rating of 500W. The research method combines design theory with experimentation to ensure high performance and stable operation. The expected results will provide an effective integration solution for UPS systems, contributing to the optimization of renewable energy usage.

**Keywords:** power converter, solar energy, UPS, circuit design, renewable energy system