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# **Design of portable solar water pump**



## Overview

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This paper proposes a solar-powered portable water pump (SPWP) for IoT-enabled smart irrigation system (IoT-SIS). A NodeMCU microcontroller with a Wi-Fi interface and soil moisture, temperature, and h.

What is a solar-powered water pump?

A solar-powered water pump is a water pump that uses energy generated by a solar panel, so it is cost-effective and environmental-friendly. The solar water pump can run continuously for most of the daytime, directly from solar cells and during nighttime using a battery. Besides, this solar water pump is portable and free of power lines.

How a portable solar water pump works?

The portable solar water pump was placed in the direction that sunlight incident directly on the solar panel. The solar water pump was connected and controlled by the application on the mobile phone. 3.6. System operational procedure.

Can a solar-powered portable water pump control IoT-enabled smart irrigation system?

An IoT smart irrigation system (IoT-SIS) is developed to monitor the surroundings and control the pump over the Internet. The IoT-SIS-SPWP system is implemented in a real environment for practical analysis and functionality testing. This paper proposes a solar-powered portable water pump (SPWP) for IoT-enabled smart irrigation system (IoT-SIS).

What is a solar pumping system?

Solar pumping system is an integration of different components which generates power from the sun and operates on direct current to drive water from a particular source over a distance to another location.

## Design of portable solar water pump

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### Design and Implementation of Solar Powered Watering ...

**ABSTRACT** Water scarcity and the push for sustainable farming demand irrigation systems that use water and energy more wisely. We developed a solar-powered smart ...

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### Design and Construction of a Mobile Solar-Powered ...

**Abstract-** To ameliorate the low availability of electrical power and poor water supply conditions experienced by rural dwellers in the Niger Delta region. A mobile ...



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### Solar Water Pumps

This document evaluates solar water pumps through technical, systems, and business model approaches, providing insights into their implementation and effectiveness.

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### Design and Fabrication of a

## Portable Solar Powered ...

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 **LFP 12V 200Ah**



## Design and Development of a Low-Cost Portable Solar Water ...

Access to clean and safe drinking water is an essential human right critical for health and well-being. People need a consistent supply of potable water essential for personal ...

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## Design and implementation of solar-powered with IoT ...

A solar-powered water pump is a water pump that uses energy generated by a solar panel, so it is cost-effective and environmental-friendly. The solar water pump can run ...

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## Design and implementation of solar-powered with IoT-Enabled portable



This paper proposes a solar-powered portable water pump (SPWP) for IoT-enabled smart irrigation system (IoT-SIS). A NodeMCU microcontroller with a Wi-Fi interface and soil ...

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## Design of A Small Scale Solar Powered Water Pumping ...

This work focuses on the design; fabrication and testing of water pump system powered by a solar photovoltaic (P.V) panel. Two 12V, 17AH battery was incorporated in the ...



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## Solar Based Water Pump

Design and development of a solar-powered water pump using Arduino microcontroller. 5th International Conference on Electrical Information and Communication ...

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## (PDF) Design and Construction of a Portable Solar Water Pump ...

The solar water pumping systems are considered as one of the most promising

areas in photovoltaic applications. This study aimed to produce a prototype of a Portable Solar Water ...

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