Solar Cell Communication System

Can solar cells improve optical wireless communication across satellite-air-ground-ocean boundaries?
To this end, we propose that solar cells with the dual functions of energy harvesting and signal acquisition are critical for alleviating energy-related issues and enabling optical wireless communication (OWC) across the satellite-air-ground-ocean (SAGO) boundaries.

How to use solar cell for simultaneous energy harvesting and communication?
To use the solar cell for simultaneous energy harvesting and communication,two branches,shown in ,are connected as a load across the two ends shown in]. In the communication branch,a capacitor,,connected in series to a load,,is used to block the DC signal.

Can solar cells be used for simultaneous signal acquisition?
In terms of the receiver,recent studies have shown that the off-the-shelf solar cells widely used for energy harvesting in satellites,buildings,and streetlights have significant application prospectsin FSO for simultaneous signal acquisition [],where this can help resolve energy-related issues.

Are solar cells a good choice for a sago communication network?
With advancements in materials and PV technology,most VLC,FSO,and UWOC systems based on various novel solar cells have shown encouraging performancein terms of data rates and transmission distances. This provides a solid foundation for the establishment of future SAGO communication networks.

In this paper, we propose a novel visible light communication system with a passive photodetector, which is implemented by using off-the-shelf and common commercial 25 mm x ...

Utilising solar cells as receivers in optical communication holds importance by enabling energy-efficient data reception, harnessing the ...

Abstract. Visible Light Communication (VLC) provides an energy-efficient wireless solution by using existing LED-based illumination for high-speed data transmissions. Although ...

Utilising solar cells as receivers in optical communication holds importance by enabling energy-efficient data reception, harnessing the power of ambient light to support ...

To this end, we propose that solar cells with the dual functions of energy harvesting and signal acquisition are critical for alleviating energy-related issues and enabling optical ...

Solar cells have shown promising performance for Simultaneous Lightwave Information and Power Transfer (SLIPT). Most of literature has focused on applying this ...

As improbable as it may seem, it's possible to construct a simple light-wave communication system using a solar cell consisting of two pennies. 1,2 This unusual take on a ...

Designing an integrated communications system with efficient features is important to researchers and designers. This paper deals with a review of the most important technologies and ...

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