Afterglow complementary photovoltaic panels

Pan, Wenwen, Sun, Xiaofei, Wang, Yilun, Cao, Yang, Lang, Yizheng, Qian, Yunsheng (2024) Enhanced photovoltaic panel defect detection via adaptive complementary fusion in YOLO-ACF.

PV panel defect detection is to identify the category and location of defects in EL images. As illustrated in Fig. 1, the common types of defects in PV panels include crack, finger...

This module is seamlessly integrated into YOLOv5 for detecting defects on photovoltaic panels, aiming primarily to enhance model detection performance, achieve model lightweighting, and accelerate ...

In order to most efficiently using the round-the-clock silicon solar cell, we will adopt the separation mode of solar cell and long afterglow luminescent material.

To tackle this challenge, we propose an Adaptive Complementary Fusion (ACF) module designed to intelligently integrate spatial and channel information.

The proposed method is capable of distinguishing between recombination of spatially-separated charge carriers and trap-assisted charge recombination simply by monitoring the delayed luminescence ...

Combine PV power generation with agriculture-related industries, to make agriculture green, high-yield and efficient, and, at the same time, fully develop and utilize solar energy (a clean energy)

The embodiment of the present invention utilizes the light guide assembly to realize the illumination of the photovoltaic panel shaded area, thereby expanding the types of plants planted under...

Agricultural - photovoltaic complementation involves installing solar panels above farmland, fish ponds, or livestock farms, enabling "dual use of one piece of land" - generating ...

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