
Sophia solar Panel Classification

What is Sophia & how does it work?

SOPHIA is an EU-funded Horizon Europe project that aims to implement advanced digital solutions in end-of-life solar panels, involving the full value chain in order to increase their current reuse, repair and recycling rates. The end goal is to foster a more circular, innovative and competitive Europe. The project will focus on:

What is Sophia Project?

New developments and trends in plastics recyclin... The SOPHIA project aims to increase the current reuse, repair and recycling rates of end-of-life solar panels.

Who coordinates the Sophia project - implementation of Advanced Digital Solutions?

In this context, AIMPLAS, the Plastics Technology Centre, coordinates the SOPHIA project - Implementation of Advanced Digital Solutions to increase the circularity of PV panels throughout the entire value chain.

What is Sophia's Horizon Europe project?

The project partners of SOPHIA gathered on 26 June 2025 in Valencia (Spain) to kick off this Horizon Europe project. Through the development of innovative solutions to boost PV panels' circularity, SOPHIA will contribute to fostering a more circular, innovative and competitive Europe.

The SOPHIA project - Implementation of Advanced Digital Solutions to increase the circularity of PV panels throughout the full value chain - is an EU-funded Horizon Europe ...

This paper introduces two novel benchmark datasets for classifying and localizing solar panel arrays in Denmark: A human annotated dataset for classification and ...

Recycling solar panels is essential to ensuring the sustainability of the photovoltaic sector. The SOPHIA project, coordinated by AIMPLAS, promotes eco-design and digital ...

Developing SSN, a deep learning architecture for the classification of solar panels, which integrates advanced convolutional and residual learning techniques, enabling highly accurate ...

With the widespread adoption of solar panels as a sustainable and cost-effective source of energy, it becomes paramount to ensure that these panels perform well, especially ...

In this paper, we present a solar panel segmentation model that works to classify and segment solar PV's in a given im-age. The model divides the training portion into two ...

This classification requires specialized handling, transportation, and disposal at permitted hazardous waste facilities rather than standard municipal landfills. The material ...

The SOPHIA project aims to increase the current reuse, repair and recycling rates of end-of-life solar panels. For the evaluation of their State-of-Health (SoH), a prototype will be ...

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The Sophia project seeks to promote the reuse, repair, and recycling of solar panels in Europe. New digital technologies such as the Digital Product Passport are being ...

