Photovoltaic panel waste utilization

In this Review, we discuss the current PV recycling strategies, covering liberation of materials and metal recovery approaches, for both pilot trials and laboratory-scale demonstrations.

This review paper addresses the composition and construction of solar panels, present recycling procedures, and the accompanying social, environmental, and economic effects.

This review outlines solar panel structures, evaluates current EoL recycling processes, and presents industrial-scale methodologies, emphasizing the need for sustainable solutions to ...

This study innovatively explored the sustainable recovery and utilization of raw materials from discarded solar panels, focusing on the transformation of recycled silicon into microporous silica ...

This review has examined the growing challenge of solar PV waste through the lens of uncertainty, highlighting how technological, market, and regulatory drivers shape environmental, ...

This research study examines the solar panel supply chain, highlighting critical stages, sources of waste generation, existing management practices, and potential areas for enhancement.

This paper reviewed the recycling technology of end-of-life photovoltaic panels, including the development, types and structure of photovoltaic panels, the removal of EVA, the separation of ...

To maximize the resource utilization of discarded PV panels, the objectives of this study are (1) to provide a recycling process for recovering high-value metals such as Ag, and (2) to prepare ...

This review addresses the growing need for the efficient recycling of crystalline silicon photovoltaic modules (PVMs), in the context of global solar energy adoption and the impending ...

This review examines the current state of solar panel waste recycling, the technologies involved, environmental protection measures, waste management strategies, and the economic aspects of ...

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