Environmental assessment of alkali treatment of photovoltaic panels

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Here we report a simple salt-etching approach to recycle Ag and Si from end-of-life Si solar panels without using toxic mineral acids and generating secondary pollution.

LCA is the most powerful environmental impact assessment tool from a product perspective and ReCiPe is one of the most advanced LCA methodologies with the broadest set of ...

Solvent versus thermal treatment for glass recovery from end of life photovoltaic panels:

The impact is described for a number of types of solar cells, in various applications, and the technology is evaluated from an environmental point of view, as compared with power production fom fossil fuels ...

This work investigates the use of toluene, d-limonene and three deep eutectic solvents (based on choline chloride, urea and zinc chloride) for the delamination process of recovered and de ...

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The main objective of this study is to assess the environmental life cycle of the materials, components, and elements of a mono-Si photovoltaic power plant towards their sustainable ...

This comprehensive analysis sheds light on the thermal degradation behavior of solar panel waste, crucial for optimizing waste treatment processes and potentially recovering valuable ...

The article provides transparent and disaggregated information on the end-of-life stage of silicon PV panel, which could be useful for other LCA practitioners for future assessment of PV...

The purpose of this research is to develop a simple integrated method for EOL solar panels treatment and to recover valuable materials such as silicon oxide (SiO2), silver/silver oxide (Ag2O), and ...

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