

HYBRID-ENERGY APPARATUS, SYSTEM, AND METHOD THEREFOR

ABSTRACT

A multi-layer apparatus has a transparent or semi-transparent substrate, a solar-cell layer coupled to the substrate, an energy-storage layer coupled to the solar-cell layer, and a converter layer coupled to the energy-storage layer. The solar-cell layer has a plurality of solar cells for receiving light through the substrate and converting energy of the received light to a first electrical energy, the energy-storage layer has one or more energy-storage units for storing a second electrical energy, and the converter layer has one or more power converters electrically connected to the solar-cell layer and the energy-storage layer for receiving the first electrical energy and the second electrical energy therefrom and outputting a third electrical energy via an output thereof.

[Figure 6A & 6B]