

ABSTRACT

A laterally deployable photovoltaic device and a solar vehicle are provided. The photovoltaic device includes at least one movable plate on which a solar cell module is arranged, a rotation drive apparatus which fixedly connects the movable plate to a vehicle body and a flipping apparatus. The rotation drive apparatus includes a fixed end and a drive end, and is secured to the vehicle body via the fixed end, the drive end of the rotation drive apparatus is fixedly connected to the movable plate, and the movable plate is driven by the rotation drive apparatus to rotate to a side of the vehicle body. A fixed end of the flipping apparatus is fixedly connected to the vehicle body, and a flipping adjusting end of the flipping apparatus is fixedly connected to the movable plate, for adjusting an angle of the movable plate relative to the vehicle body. In the laterally deployable photovoltaic device and the solar vehicle, the rotation drive apparatus drives the movable plate to deploy the movable plate on side of the vehicle body to increase an effective area for collecting solar energy and drives the movable plate to retract the movable plate when the solar vehicle is moving so as not to affect movement of the vehicle.

(Figure 1)