

عنوان مقاله:

Progress on Flat-Plate Water Based of Photovoltaic Thermal (PV/T) System: A Review

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خلاصه مقاله:

A photovoltaic/thermal (PV/T) device is a combined solar thermal device and photovoltaic device in a single unit. The capability of PV/T devices to produce thermal energy and electricity simultaneously bestows them promising market value in near future. The higher specific heat and lower fluctuation during variation irradiance of liquid compared to air make liquid-based devices more advantageous. This study reviews the available literature on flat plate, water-based PV/T collectors, conducts an economic analysis and discusses future development. Detailed analysis of the performance of the device is also included, in terms of thermal, electrical and overall efficiency. Previous experimental work and simulations are also reported, including several selected case studies. Some of the drawbacks need to be solved to make water-based PV/T systems cost effective and ready for the market.

کلمات کلیدی:

Absorber, Collector, Photovoltaic thermal, Water based, Hybrid PV/T

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