A-Core Container

Cadmium Telluride solar Inverter

Overview

What is cadmium telluride solar cell?

Cadmium telluride (CdTe) solar cell is a kind of thin-film solar cell. It is both cost-effective and commercially viable. CdTe has a high value of optical absorption coefficient with good chemical stability and bandgap of 1.5 eV. The properties of CdTe make it the most attractive material for thin-film solar cell design.

What is cadmium telluride (CdTe) photovoltaic (PV)?

The United States is the leader in cadmium telluride (CdTe) photovoltaic (PV) manufacturing, and NREL has been at the forefront of research and development in this area. PV solar cells based on CdTe represent the largest segment of commercial thin-film module production worldwide.

Are cadmium telluride solar panels a good investment?

Cadmium telluride solar panels have a lower efficiency level, which is a drawback. Currently, they achieve an efficiency of 10.6%, significantly lower than the typical efficiencies of silicon solar cells. While price is a major advantage, it's essential to consider this factor when making an investment decision.

What is the cadmium telluride PV perspective paper?

SETO released the Cadmium Telluride PV Perspective Paper in January 2025, outlining the state of CdTe PV technology and SETO’s priorities to reduce costs, address materials availability, and support the scale-up of CdTe within the domestic utility-scale PV market. A large-scale solar array in Colorado with CdTe modules.

What is cadmium selenium tellurium (CdTe)?

In modern cells, cadmium selenium tellurium (CdSeTe) is often used in conjunction with CdTe to improve light absorption. Learn more about how

solar cells work. CdTe solar cells are the second most common photovoltaic (PV) technology after crystalline silicon, representing 21% of the U.S. market and 4% of the global market in 2022.

How are cadmium telluride modules manufactured?

The manufacturing process for cadmium telluride modules can be split into 4 main steps: Cadmium and tellurium are byproducts of mining operations for zinc and copper, respectively. The waste from these mining processes have so far produced more than enough Cd and Te, so no extra mining is needed.

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