

Cadmium Telluride Solar Tiles





Overview

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.

What are the advantages of cadmium telluride (CdTe) thin film solar cells?

1. Introduction Cadmium Telluride (CdTe) thin film solar cells have many advantages, including a low-temperature coefficient ($-0.25\ \%/^{\circ}\text{C}$), excellent performance under weak light conditions, high absorption coefficient ($105\ \text{cm}^{-1}$), and stability in high-temperature environments.

What is cadmium telluride (CdTe)?

Cadmium Telluride (CdTe) CdTe has become a leading TFPV technology, gaining market dominance due to its cost-effectiveness and improving efficiency. Its fabrication is simple and cost-efficient, using methods like electrodeposition or vapor transport deposition.

Can cadmium zinc Telluride and cdmgte be used together?

The incorporation of zinc or magnesium to form cadmium zinc telluride (CdZnTe) and cadmium magnesium telluride (CdMgTe) represents a possible way to move the bandgap into a viable regime for tandem incorporation, but using these materials introduces processing challenges that have thus far prevented their use in high-throughput manufacturing.



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