

Wooden solar power generation

How is a wood-based solar evaporator produced?

Conclusion A simple and robust wood-based solar evaporator was produced through mechanical processing and surface coating. The corrugated structure of the longitudinal wood block facilitates water passage in the longitudinal direction and increases the evaporation area.

What is the latest progress of wood-based solar evaporators?

Secondly, the latest progress of wood-based solar evaporators is summarized from the aspects of photothermal material decorative wood, carbonized wood, structural design, etc., and the recent progress in the application of wood evaporators in seawater desalination, wastewater purification and energy production were discussed.

Are wood-based solar evaporators feasible?

The strategy is universal and feasible, since large-sized wood plank from both hardwood and softwood enable fabrication of corrugated wood-based evaporators. Therefore, the scalability, processability, economy, stable performance and high efficiency render our demonstrated wood-based solar evaporator extremely attractive for realistic applications.

Can plasmonic wood be used for solar steam generation?

Zhu, M. et al. Plasmonic wood for high-efficiency solar steam generation. *Adv. Energy Mater.* 8, 1701028 (2018). Gong, F. et al. Scalable, eco-friendly and ultrafast solar steam generators based on one-step melamine-derived carbon sponges toward water purification.

Can natural wood be used as an evaporator for solar desalination?

Low-cost natural wood was used as an evaporator for solar desalination owing to its microporous structure and excellent hydrophilicity. Most research constructed planar devices by coating light-absorbing materials on the transverse and longitudinal sections of natural wood 41,42,43,44.

Is Ag-PDA@wood a good solar evaporator?

The results upon sewage treatment and seawater desalination indicate that Ag-PDA@wood has an excellent purification ability and self-desalting capacity. More importantly, when compared to traditional solar evaporators, Ag-PDA@wood exhibits high antibacterial activity.

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