



Solar Thermal Energy Storage Materials: The Secret Sauce for 24/7 Clean Power

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Why Your Solar Panels Need a "Thermal Battery"

Ever wondered how solar plants keep your lights on after sunset? Meet the solar thermal energy storage materials - the unsung heroes turning sunshine into an all-night diner. These advanced materials act like a thermal sponge, soaking up heat by day and releasing it at night. But what makes these materials so special? Let's break this down.

The Material Hall of Fame

Not all materials are created equal in the solar thermal storage game. Here's the starting lineup:

Molten Salts (The MVP): Nitrate-based mixtures that flow like liquid gold at 565°C. PS10 plant in Spain stores 110 MWh - enough to power 6,000 homes after dark

Ceramic Bricks: Think LEGO for adults. Siemens Gamesa's 1,000°C blocks can store heat for a week with

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