
The results show that among the selected nanoparticles, SiO 2 nanoparticles are the most effective at enhancing the specific heat capacity and thermal conductivity of the ternary carbonates.

Project Goals: Determi ne f e a s i b i l i t y of using carbonate salts as storage media for high temperature applications (700°C - 8700C). Review carbonate s a l t properties and select six ...

In summary, the high-temperature stability and reliability of the synthesized microcapsules and their rapid charging/discharging performance demonstrate the applicability of molten salt microcapsules ...

This study aimed to develop surfactant-free synthesis protocols for the microencapsulation of a binary carbonate eutectic (Li 2 CO 3 and K 2 CO 3 at a 28:72 mass ratio) in ...

Completed the TES system modeling and two novel changes were recommended (1) use of molten salt as a HTF through the solar trough field, and (2) use the salt to not only create steam but also to ...

This study aimed to develop surfactant-free synthesis protocols for the microencapsulation of a binary carbonate eutectic (Li 2 CO 3 and K 2 CO 3 ...

In recent years, metal carbonate-based melts have been investigated as the promising heat transfer fluid and thermal energy storage medium for concentrating solar power plants.

Among the potential TCES, the metal carbonate-based system is one of the most promising alternatives due to its high-turning temperature, high-energy density, and usually the low price of the raw materials.

Possessing nontoxicity, high thermochemical energy storage density, and good compatibility with supercritical CO2 thermodynamic cycles, calcium carbonate (CaCO3) is a very ...

This article explores innovative approaches to enhance the feasibility of high-temperature molten salt

applications, emphasizing the economic advantages and improved thermal storage ...

In this work, carbonate for heat storage has the same composition as electrolyte carbonate. Thus, in subsequent experiments, the cathode C-carbonate mixed product will be added ...

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