Phase change energy storage mortar

Building on the advancements in integrating phase change materials (PCM) within building envelopes to enhance thermal performance, this paper explores the use of slag ...

Effect of modified diatomite based shape-stabilized phase change materials on multiphysics characteristics of thermal storage mortar Miao Ren a, Hua Zhao b, Xiaojian Gao ...

Solar thermal energy efficiency of cementitious mortar is enhanced by introducing a phase change material (PCM) with thermal energy harvesting/releasing ability. Within this framework, a new ...

The phase change energy storage mortar has good thermal performance and energy storage and temperature regulation capability while meeting the requirements of ...

In order to study the effect of bio-coating/phase change microcapsules on the mechanical and temperature control properties of cement mortar, phase change microcapsules ...

Preparation and characterization of innovative cement mortar incorporating fatty acid/expanded graphite composite phase change material for thermal energy storage

In this study, lightweight and porous titanium-bearing blast furnace slag (Ti-BFS) was innovatively used as PCM carrier to prepare paraffin/Ti-BFS phase change aggregate ...

To mitigate the growing energy consumption of the construction industry, researchers have developed thermal energy storage technology using phase-change materials ...

To explore the application of phase change energy storage materials in building energy conservation, in this study, an innovative composite thermal energy storage cement mortar ...

In this study, the pore system of ETS was fully utilized to load paraffin for fabrication of phase change aggregate (PCA), and then the PCA was used to prepare phase ...

The composite phase change energy storage thermal insulation mortar was composed of complex shaped phase change particles, desulfurization gypsum, admixture and other components, and ...

Abstract Passive latent energy storage technologies based on phase change materials (PCMs) offer a potential solution for reducing energy consumption and regulating ...

To explore the application of phase change energy storage materials in building energy conservation, in this

study, an innovative composite thermal energy storage cement ...

Abstract In this study, cement-based thermal energy storage composites (TESC) were developed by integrating a novel phase change material (PCM) composite into ordinary ...

Cement based-thermal energy storage mortar including blast furnace slag/capric acid shape-stabilized phase change material: physical, mechanical, thermal properties and ...

In the current work, the thermal energy storage cement mortars were prepared by physical mixing between cement mortar and form-stable hydrated salt based on disodium ...

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