Thermochemical energy storage systems

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Thermochemical energy storage (TCES) is considered the third fundamental method of heat storage, along with sensible and latent heat storage. TCES concepts use reversible reactions to store energy in chemical bonds. During discharge, heat is recovered through the reversal reaction. In the endothermic charging process, a material dissociates into components that can be stored at ambient temperature, which is a unique property of TCES. This chapter introduces the technical variants of TCES and presents the state of the art of this storage technology.