

<p>The energy transition is the pathway to transform the global economy away from its current dependence on fossil fuels towards net zero carbon emissions. This requires the rapid and large-scale deployment of renewable energy. However, most renewables, such as wind and solar, are intermittent and hence generation and demand do not necessarily match. One ...

The development of two-dimensional (2D) materials is experiencing a renaissance since the adventure of graphene. 2D materials typically exhibit strong in-plane covalent bonding and weak out-of-plane van der Waals interactions through the interlayer gap. Opening 2D materials is an effective way to alter the physical and chemical properties, such as band gap, conductivity, ...

The use of Thermal Energy Storage (TES) in buildings in combination with space heating, domestic hot water and space cooling has recently received much attention. A variety of TES techniques have developed over the past decades, including building thermal mass utilization, Phase Change Materials (PCM), Underground Thermal Energy Storage, and energy storage ...

In contrast to these PTES concepts, the Compressed Heat Energy Storage (CHEST) concept presented in this paper is based on a medium temperature conventional Rankine cycle combined with a latent ...

Within the framework of the energy transition and according to the idea of sustainability, today's energy systems are subject to change. The transition from fossil fuel to renewable sources presents major challenges [1]. Due to high fluctuations in renewable power generation, flexibility measures like energy storages on a comparable scale are likely to be ...

PDF | On Dec 22, 2022, Hamed Hematpur and others published Review of underground hydrogen storage: Concepts and challenges | Find, read and cite all the research you need on ResearchGate

The thermal energy storage system has been proposed to alleviate this problem by storing energy for release at the required time. 3, 4 These systems can be classified into several types by working ...

Web: <https://arcingenieroslaspalmas.es>