Overview of molten salt technology in the CSP sector - state of the art and current research

Energy storage is a key technology for a future climate-neutral energy supply with volatile photovoltaic and wind generation. In addition to the well-known electrical storage technologies pumped hydro, power-to-gas-to-power and batteries, the contribution of thermal energy storage to the electrical grid is rather unknown. At the end of 2019 the worldwide dispatchable power generation capacity from molten salt storage in concentrating solar power (CSP) plants was 21 GWh_{el}, making it a fully commercial large-scale technology. This presentation will give an overview of the state-of-the-art and current research of molten salt storage in CSP at the material, component and system integration level. In addition, new potential areas for technology transfer are outlined (e.g. industrial processes, conventional power plants and electrical energy storage).

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