

New adsorbents for thermochemical heat storage

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Nowadays, only a very limited number of adsorbent materials are used for heat transformation and thermochemical heat storage based on adsorption processes. New or modified adsorbents are needed to ensure improved adsorption performance and stability over several thousand cycles. Most promising solutions include composite adsorbents (e.g. porous matrix impregnated with hygroscopic substances), modified zeolites (dealuminated, ion exchanged, surface altered, MeAPO) and Metallic Organic Frameworks (MOFs). Brief dynamic considerations are also provided.

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