

Figure S1. N₂ adsorption/desorption isotherms for the biochar sample SST5002hN₂.

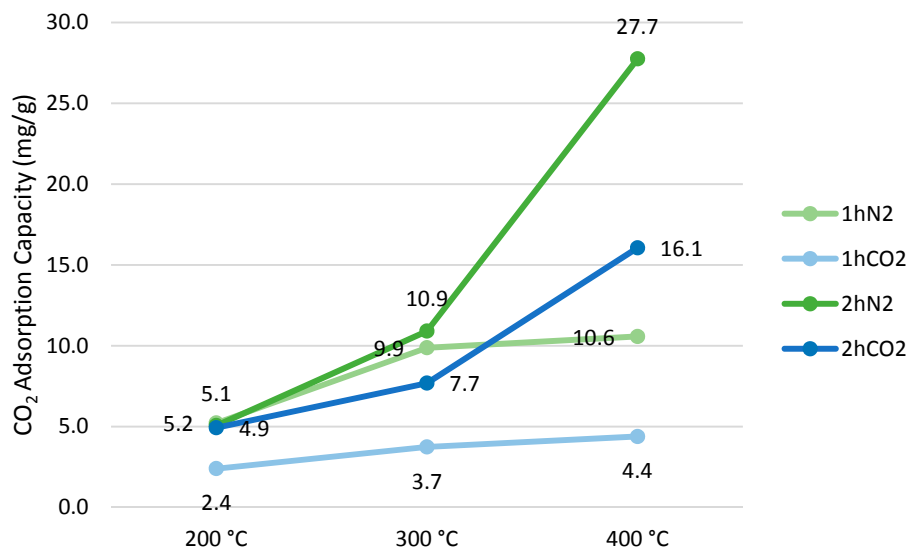


Figure S2. CO₂ adsorption capacity at different temperature (1-2 hours holding time fixed, variable water content).

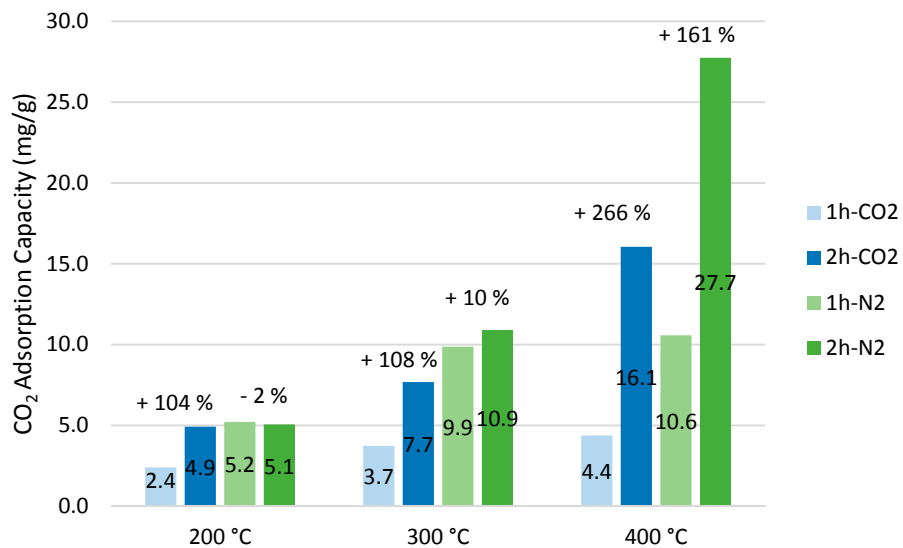


Figure S3. Dwell time comparison between 1 and 2 hours for direct activation with CO₂ and pyrolysis (variable water content).

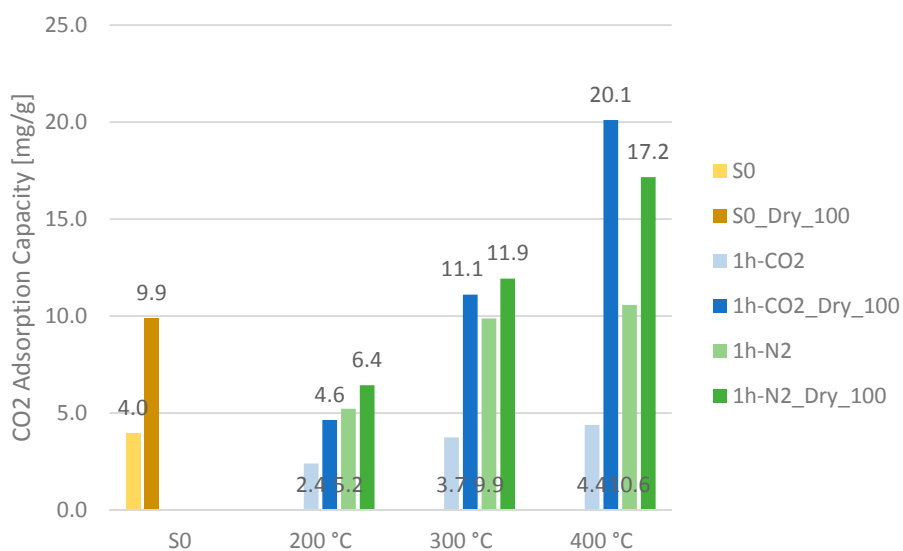


Figure S4. Drying treatment effect on the biochar samples activated with a dwell time of 1 hour.

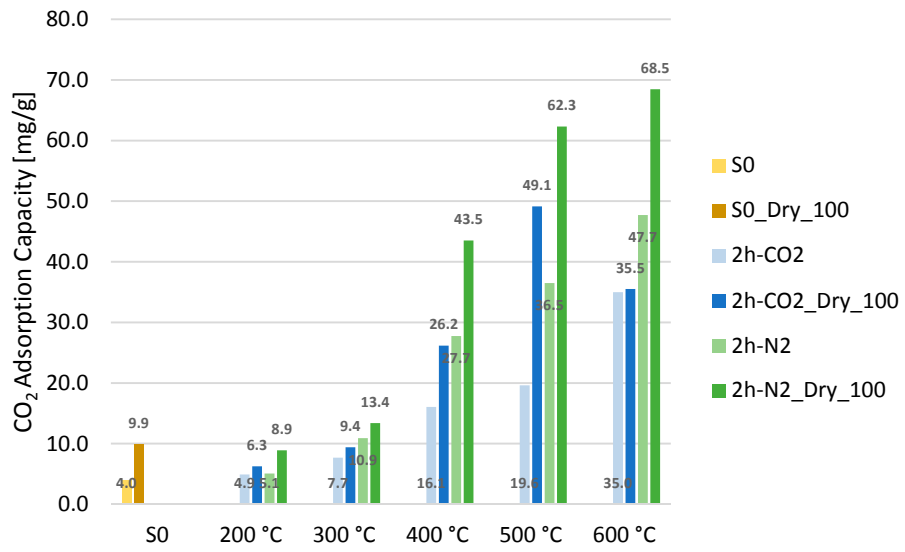


Figure S5. Drying treatment effect on the biochar samples activated with a dwell time of 2 hours.

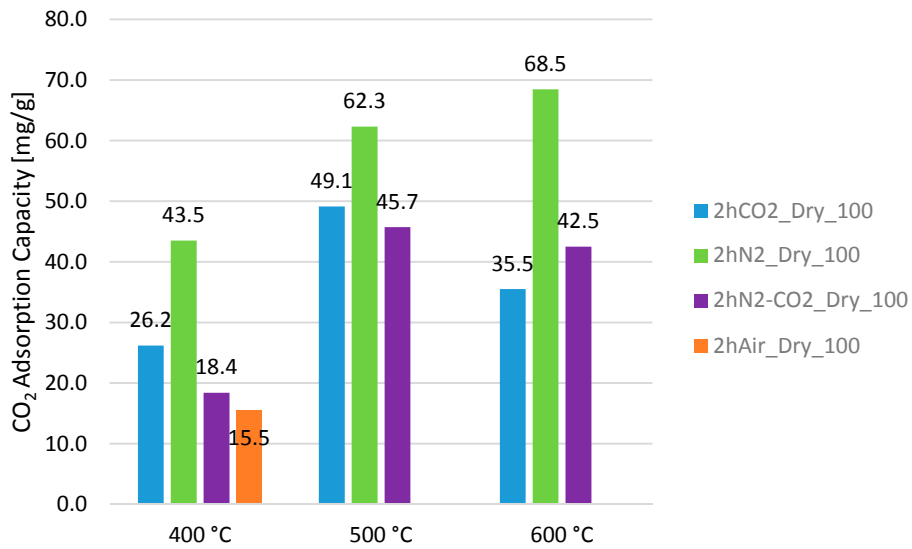


Figure S6. CO₂ adsorption capacity comparison with different methods.