

Article

Evaluation of ZIF-8 and ZIF-90 as heat storage materials by using water, methanol and ethanol as working fluids

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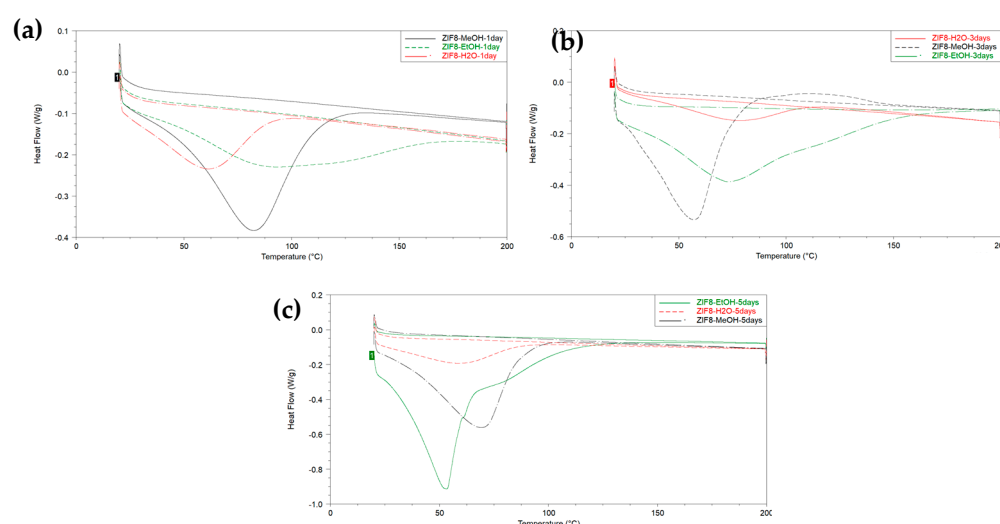
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Supporting Information



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Figure S1. DSC for ZIF-8 after soaking in water (red), methanol (black) and ethanol (green) for (a) 1 day, (b) 3 days and (c) 5 days.

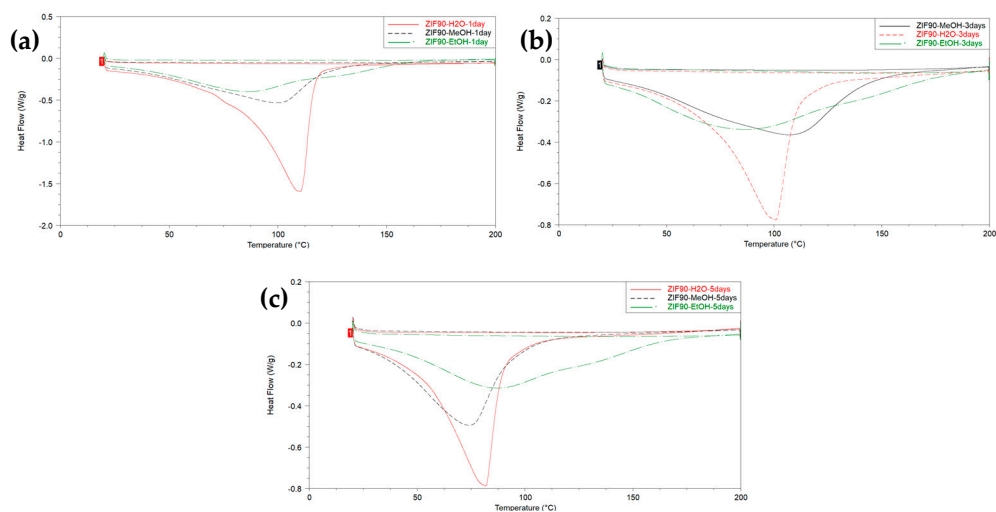


Figure S2. DSC for ZIF-90 after soaking in water (red), methanol (black) and ethanol (green) for (a) 1 day, (b) 3 days and (c) 5 days.

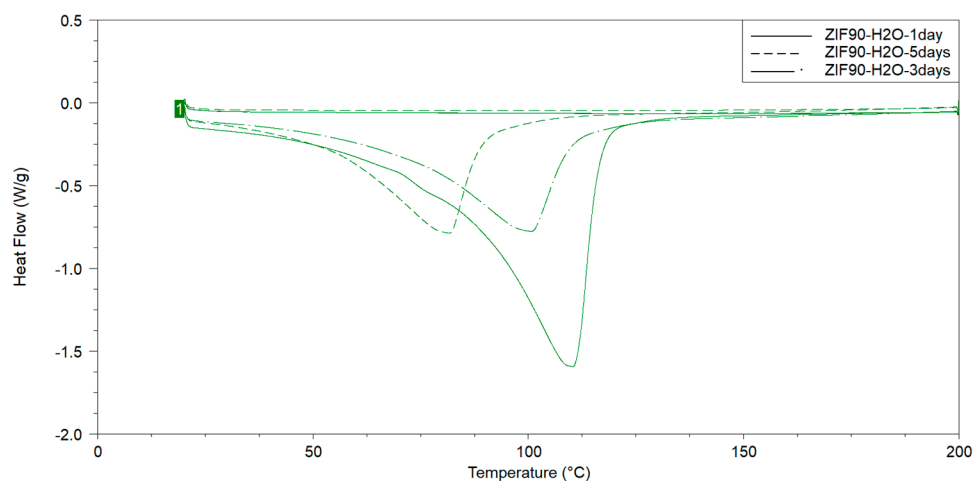


Figure S3. DSC for ZIF-90 after soaking in water for 1 day, 3 days and 5 days.

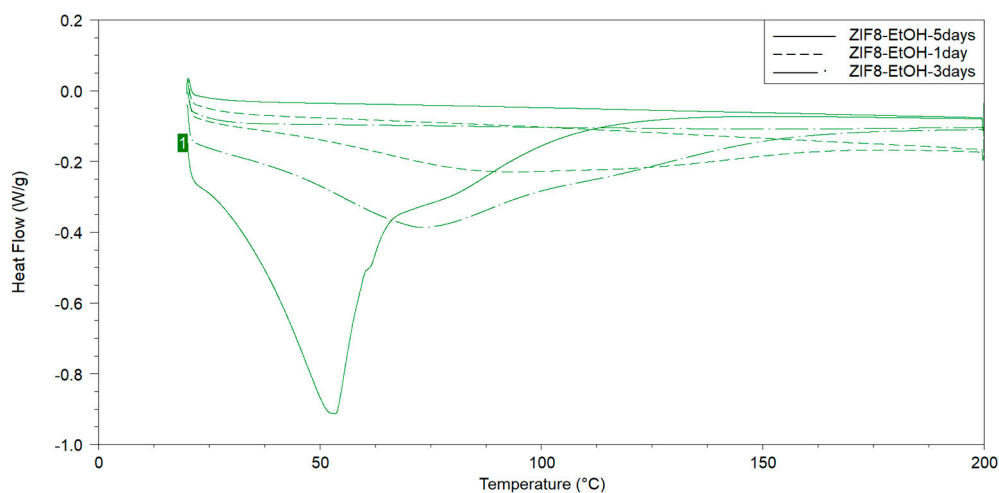
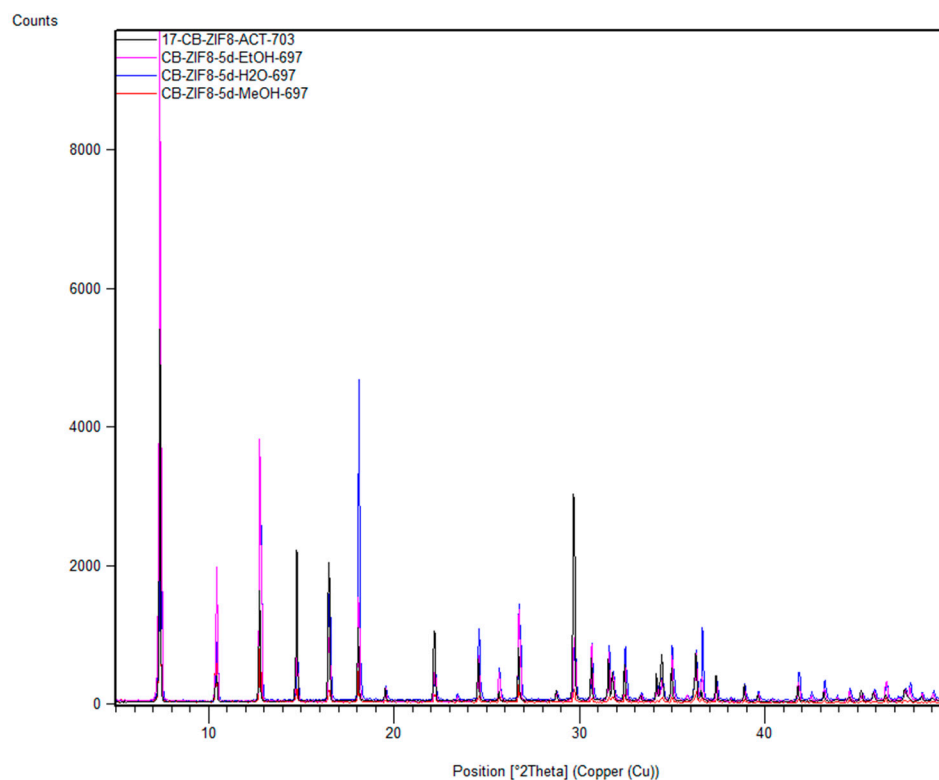


Figure S4. DSC for ZIF-8 after soaking in ethanol for 1 day, 3 days and 5 days.

Table S1. BET analysis for both ZIFs and after they had been in the 3 desiccators for 5 days, showing the specific surface area (S_{BET}) and total pore volume (V_{total}).

ZIF	S_{BET} [m^2/g]	V_{total} [cm^3/g]
ZIF8	612	0.252
ZIF8-MeOH	948	0.346
ZIF8-EtOH	919	0.340
ZIF8-H ₂ O	590	0.241
ZIF90	1119	0.571
ZIF90-MeOH	876	0.462
ZIF90-EtOH	881	0.466
ZIF90-H ₂ O	780	0.418

**Figure S5.** PXRD patterns of ZIF-8 after activation (black) and after being in the methanol (red), ethanol (pink) and water (blue) desiccators for 5 days.

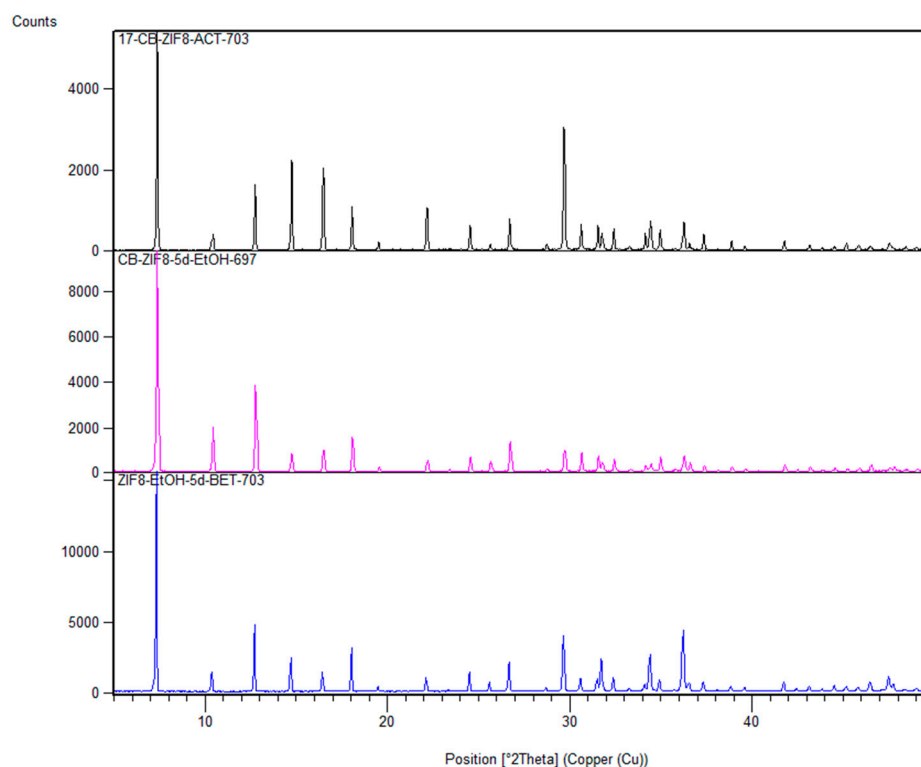


Figure S6. PXRD patterns of ZIF-8 after activation (black), after being in the ethanol desiccator for 5 days (pink) and after the 'soaked' sample was analysed for Nitrogen physisorption (blue).

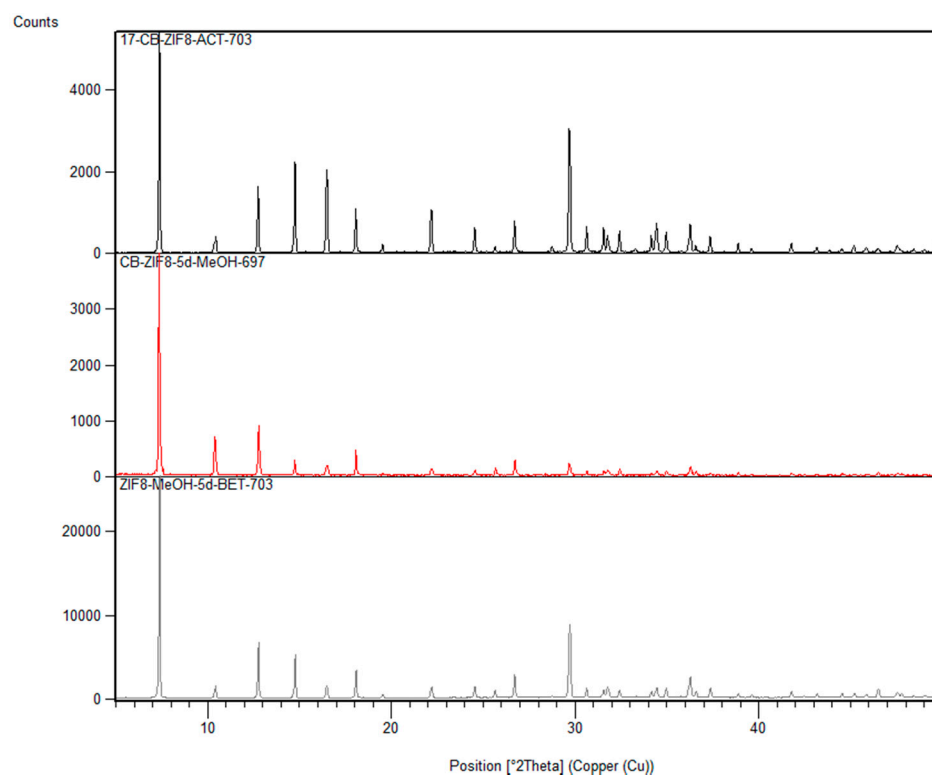


Figure S7. PXRD patterns of ZIF-8 after activation (black), after being in the methanol desiccator for 5 days (red) and after the 'soaked' sample was analysed for Nitrogen physisorption (grey).

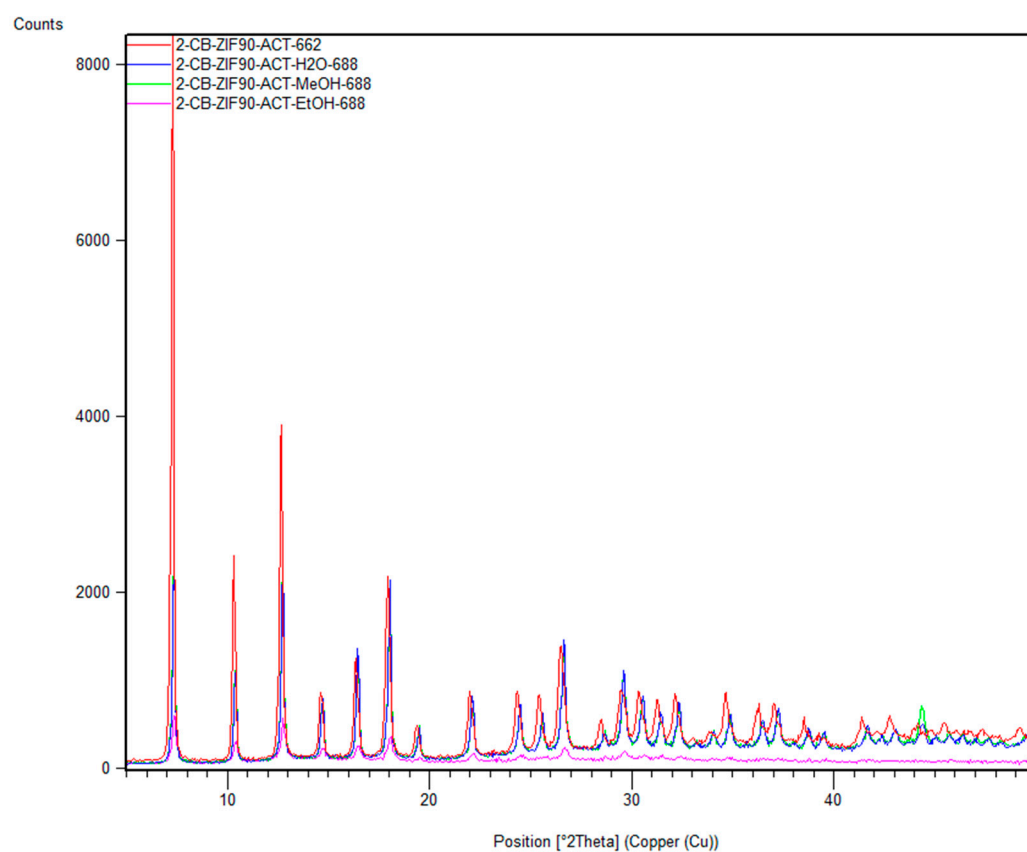


Figure S8. PXRD patterns of ZIF-8 after activation (red) and after being in the methanol (green), ethanol (pink) and water (blue) desiccators for 5 days.