

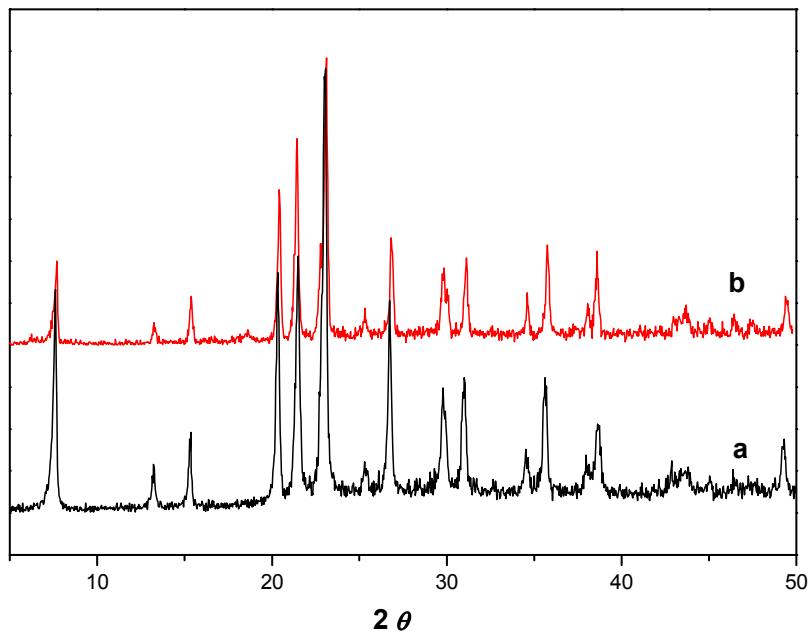
**Supporting information for “*In Situ* High Temperature High Pressure  
MAS NMR Study on the Crystallization of AlPO<sub>4</sub>-5”**

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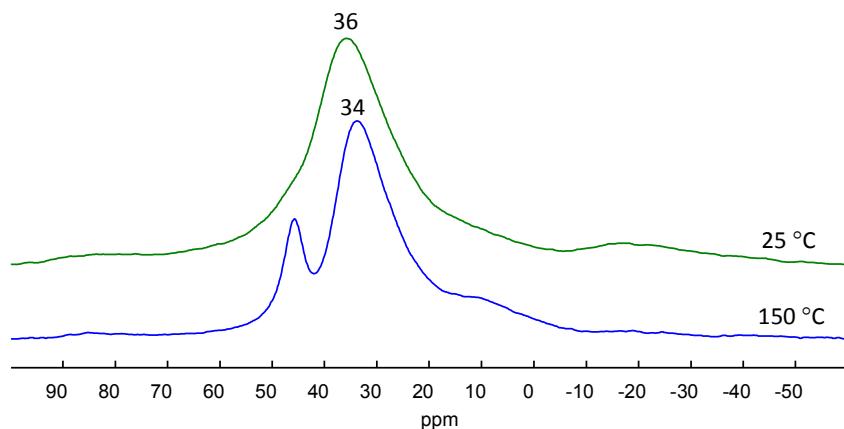
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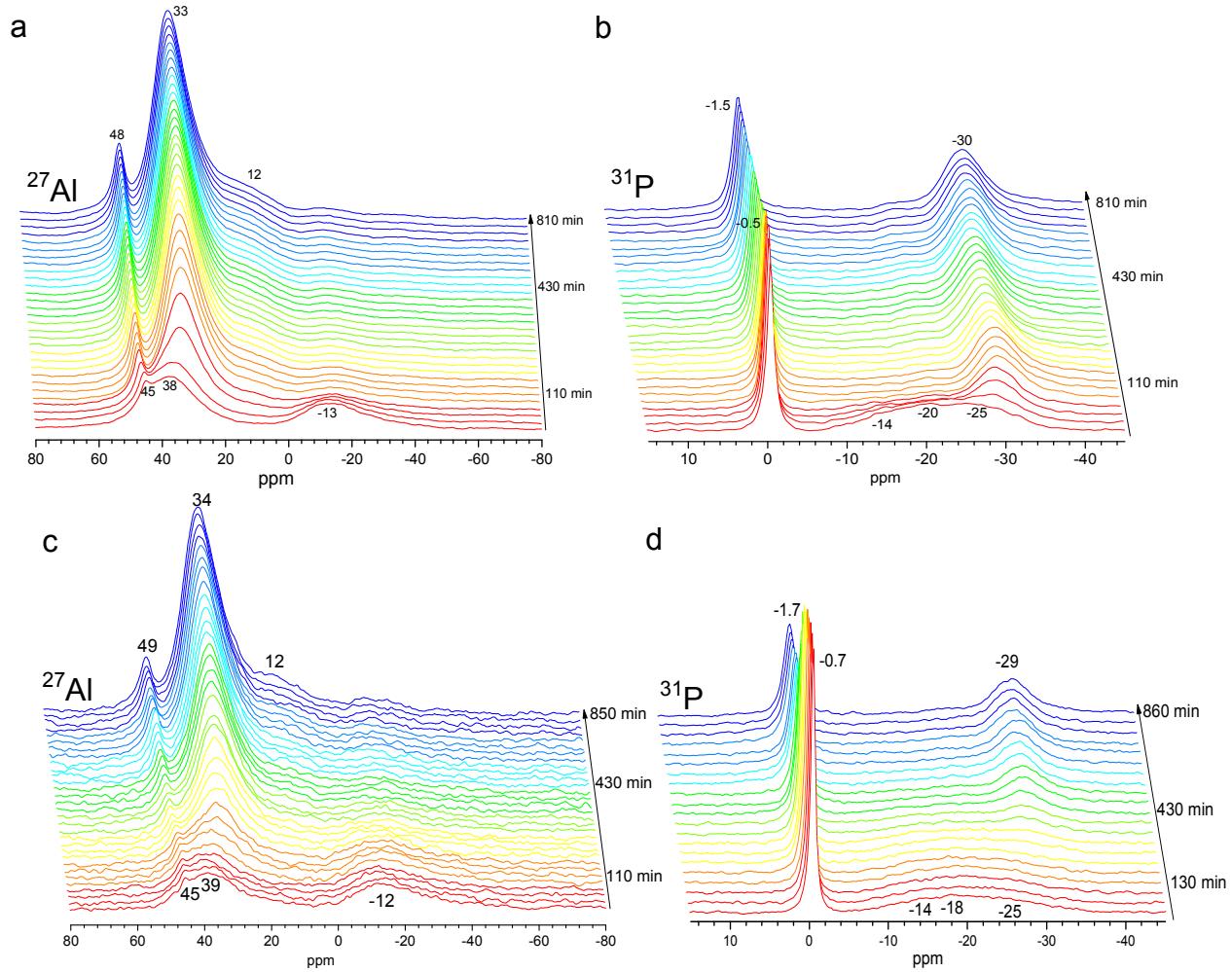
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**Figure S1:** XRD patterns of AlPO<sub>4</sub>-5 molecular sieve synthesized from autoclave (a) and *in situ* MAS rotor (b) at 150 °C for 12 h.

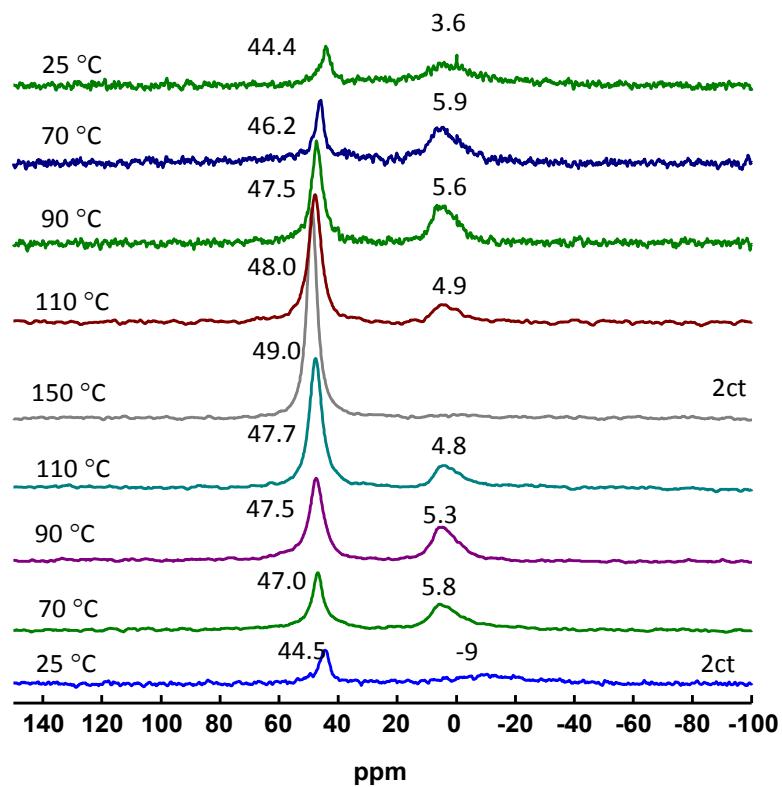


**Figure S2.** <sup>27</sup>Al MAS NMR spectra of crystallized AlPO<sub>4</sub>-5 sample after *in situ* experiment at 150 °C and 25 °C respectively.

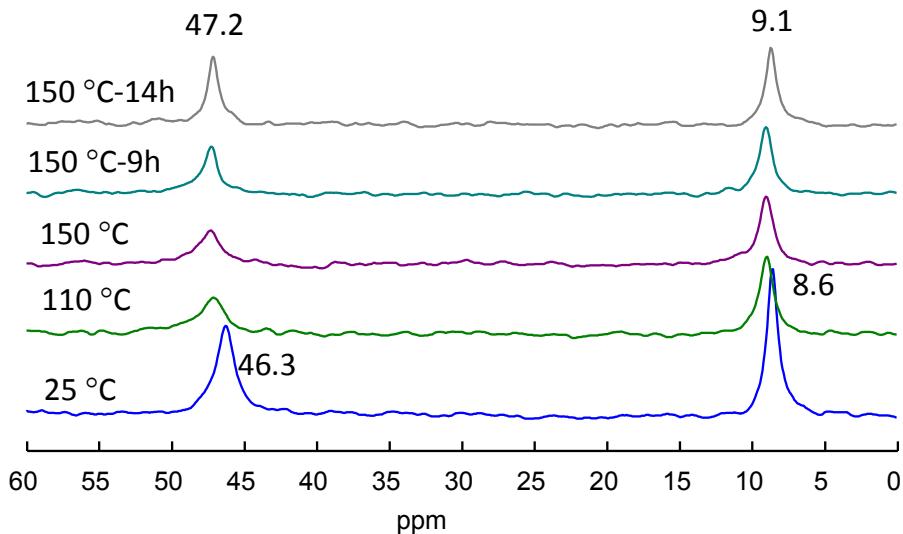


**Figure S3:** *In situ*  $^{27}\text{Al}$  and  $^{31}\text{P}$  MAS NMR spectra of synthesis gel of AlPO<sub>4</sub>-5 with larger amount of water at 150 °C: a) and b)  $\text{Al}_2\text{O}_3:\text{P}_2\text{O}_5:\text{TEA}:\text{H}_2\text{O} = 1:1.32:1.2:46$ , c) and d)  $\text{Al}_2\text{O}_3:\text{P}_2\text{O}_5:\text{TEA}:\text{H}_2\text{O} = 1:1.32:1.2:88$ .

<sup>27</sup>Al MAS NMR



**Figure S4.** Varying temperature <sup>27</sup>Al MAS NMR spectra of extracted mother liquid after AlPO<sub>4</sub>-5 crystallization. 2ct denotes 2 times number of scan.



**Figure S5.** Selected *in situ* <sup>13</sup>C MAS NMR spectra of synthesis gel during crystallization process.