## **Supplementary Information**

## for

## Synthesis and *in situ* transformation of PST-1: a potassium gallosilicate natrolite with a high Ga content

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Fig. S1 Powder XRD pattern and SEM image of PST-1 obtained by heating a synthesis mixture with  $SiO_2/Ga_2O_3 = 5$  and  $K_2O/SiO_2 = 0.8$  under rotation (60 rpm) at 150 °C for 2 days.



Fig. S2 TGA/DTA curves for TNU-6.



**Fig. S3** Synchrotron powder diffraction data for TNU-6. The supercell reflections are marked by asterisks.



**Fig. S4** <sup>71</sup>Ga MAS NMR spectrum of TNU-6. Spinning side bands are marked by asterisks.