## **Supporting Information**

## Fabricating self-assembled SAPO-5 with tailored mesoporosity and acidity using a single template

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Figure S1 SEM images of SAPO-5-1.5TEA (a) and SAPO-5-2.0TEA (b).



**Figure S2** Conversion versus temperature in n-heptane hydroisomerization for SAPO-5-TEA series catalysts. (Reaction conditions: WHSV =  $10 h^{-1}$ , H<sub>2</sub>/heptane = 400, and hydrogen pressure = 1.5 MPa).



**Figure S3** Conversion (A) and product iso-C7 yield (B) versus temperature in n-heptane hydroisomerization. (Reaction conditions: WHSV = 10  $h^{-1}$ ,  $H_2$ /heptane = 400, and hydrogen pressure = 1.5 MPa).