

Supporting Figure 1. (A) XRD patterns of as-synthesized JLU-14 samples synthesized at various temperatures of (a) JLU-14<sub>RT</sub>, (b) JLU-14<sub>40</sub>, (c) JLU-14<sub>60</sub>, (d) JLU-14<sub>80</sub>, and (e) JLU-14<sub>100</sub>;

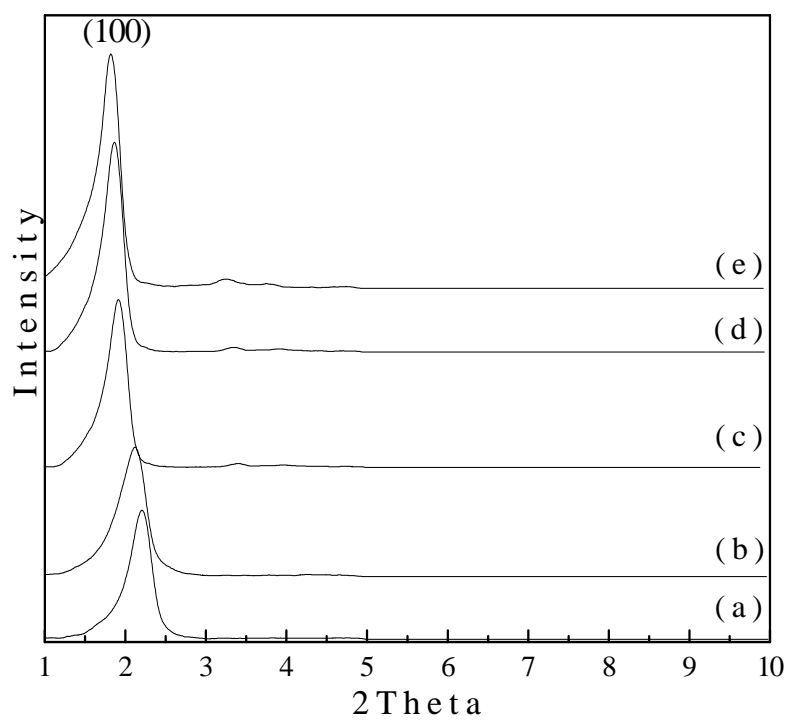
(B) XRD patterns of as-synthesized JLU-15 samples synthesized at various temperatures of (a) JLU-15<sub>RT</sub>, (b) JLU-15<sub>40</sub>, (c) JLU-15<sub>60</sub>, (d) JLU-15<sub>80</sub>, and (e) JLU-15<sub>100</sub>

Supporting Figure 2. TG curve of JLU-14<sub>100</sub>

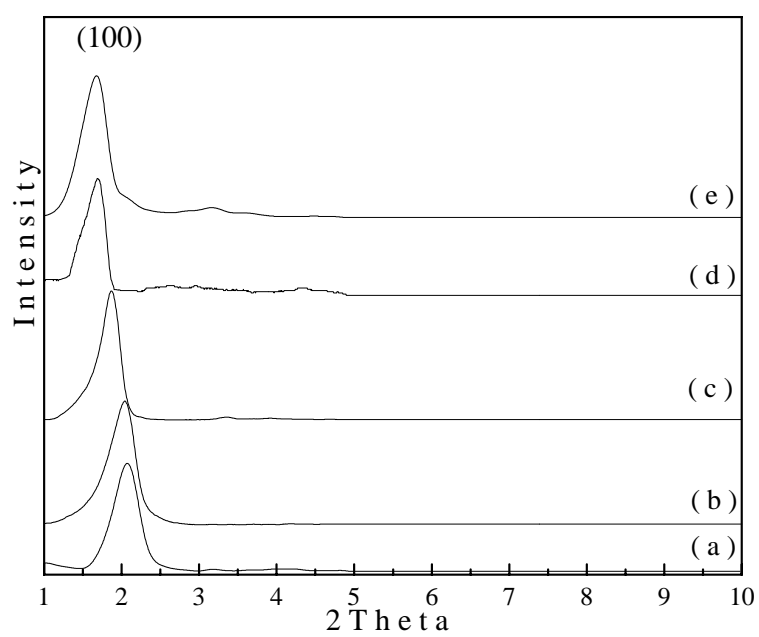
Supporting Figure 3. *t*-plots of JLU-15<sub>60</sub>

Supporting Figure 4. XRD pattern of hexagonal-like mesoporous silica materials synthesized at 100 °C in strongly acidic media using CF<sub>3</sub>(CF<sub>2</sub>)<sub>5</sub>(EO)<sub>14</sub> (FSN-100) as a template.

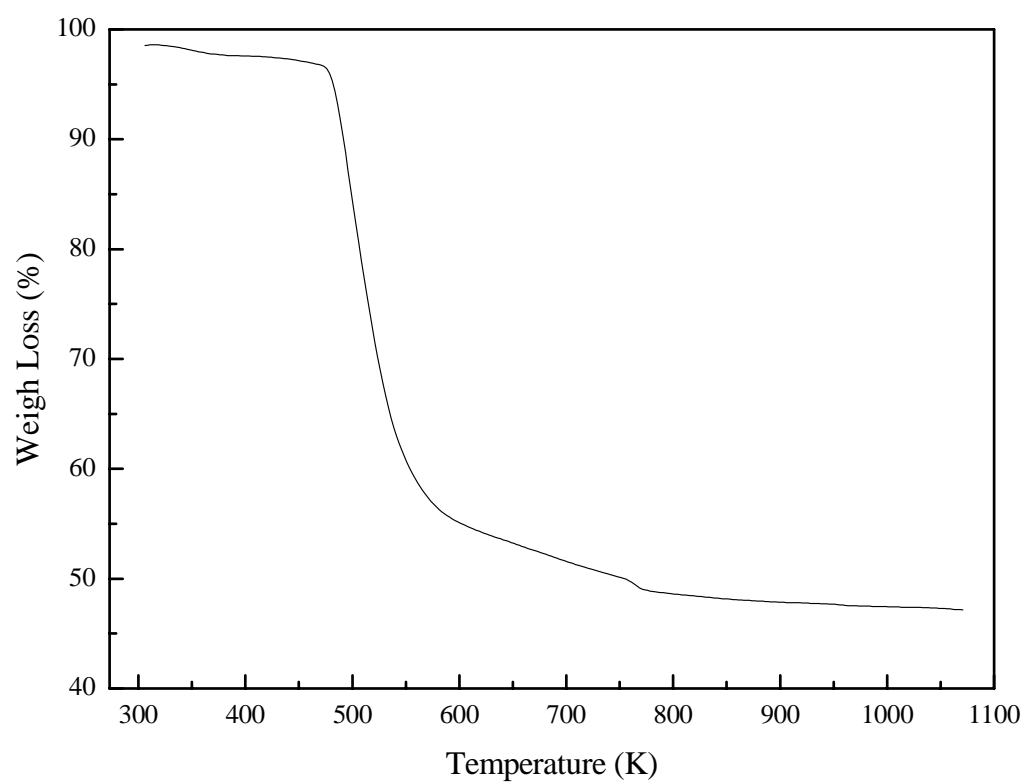
Supporting Figure 5. XRD pattern of Ti-JLU-14(n) in wide range region of 10-40°



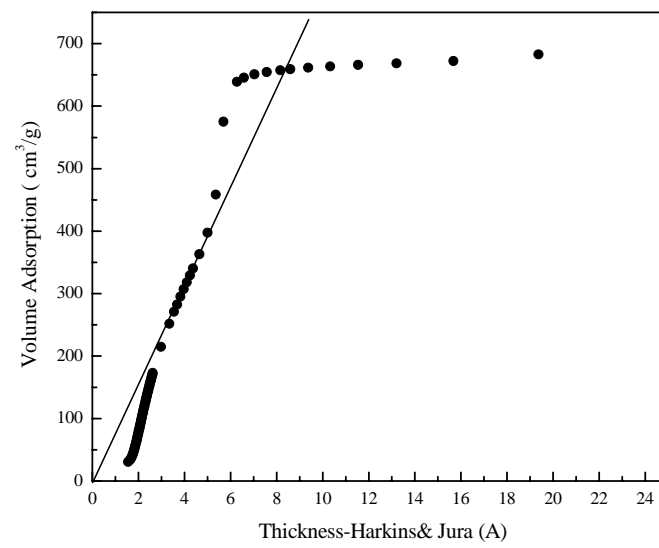
Supporting Figure 1(A)



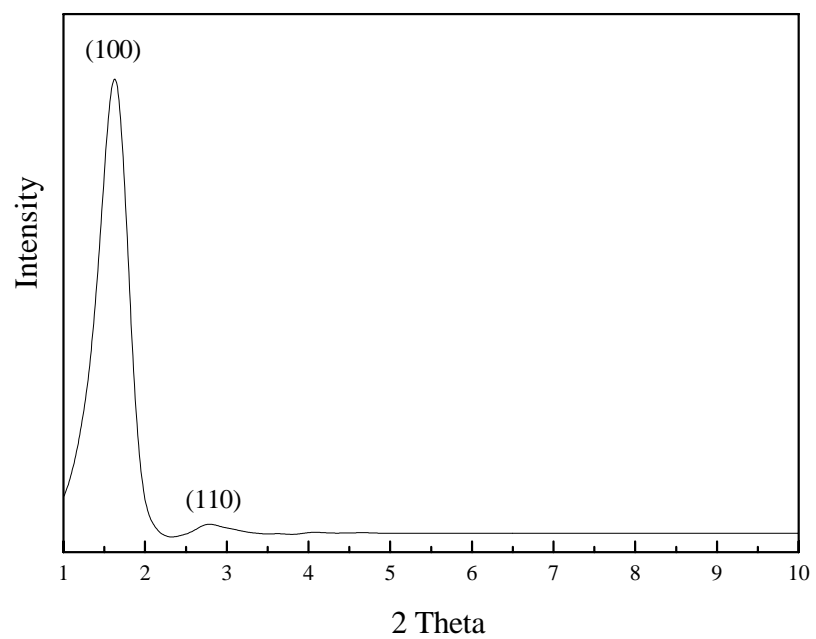
Supporting Figure 1(B)



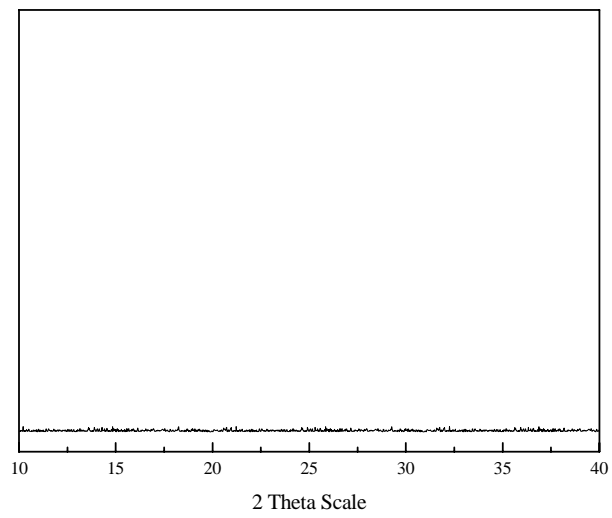
Supporting Figure 2



Supporting Figure 3



Supporting Figure 4



Supporting Figure 5