

Electronic Supplementary information:

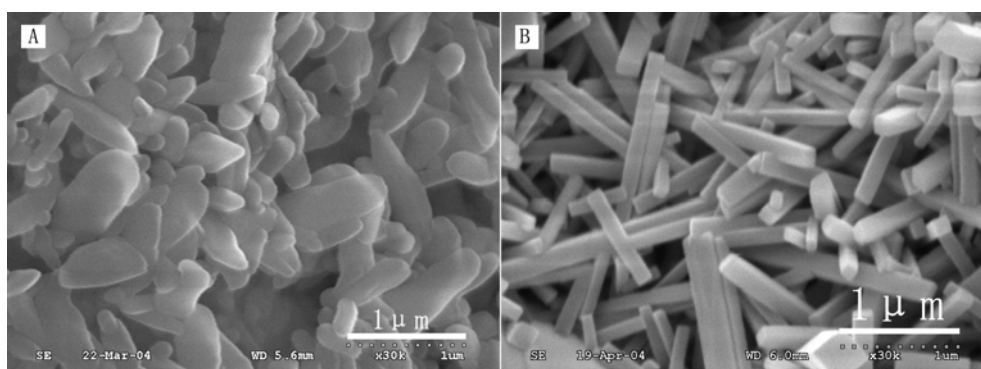


Fig. 1S SEM images of the mullite synthesized at 1200 °C for 5h, the amount of WO<sub>3</sub> catalyst is (A) molar ratio of WO<sub>3</sub> / AlCl<sub>3</sub>=0, (B) molar ratio of WO<sub>3</sub> / AlCl<sub>3</sub>=1:2.

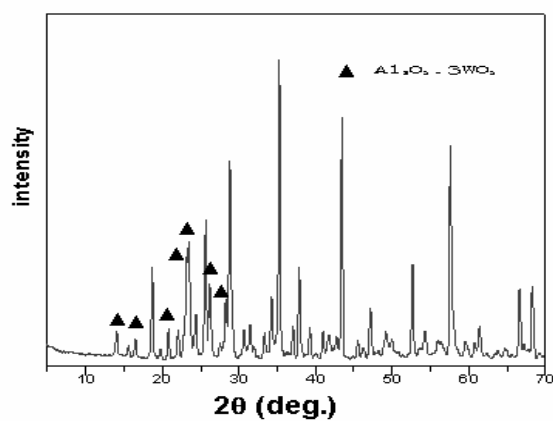


Fig. 2S XRD pattern of mullite precursor calcined at 1000 °C for 5h.

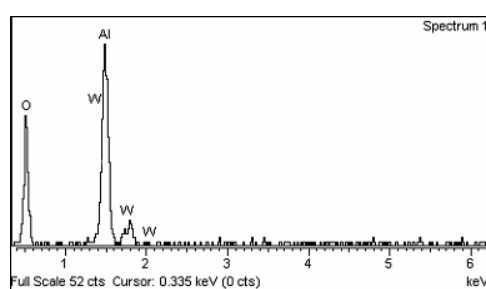


Fig. 3S The analysis of EDX of rod-like precursor calcined at 1000 °C for 5h.

