

Supporting information

Enhanced Catalytic Performance for Metathesis Reactions over Ordered Tungsten and Aluminum Co-doped Mesoporous KIT-6 Catalysts

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Table S1. Binding energies and molar percentages of W^{5+} and W^{6+} species in W-KIT-6 and W-Al-KIT-6-10 samples.

Catalysts	Binding energies for W_{4f} (eV)				Atomic cont.	
	$W^{6+} 4f_{5/2}$	$W^{6+} 4f_{7/2}$	$W^{5+} 4f_{5/2}$	$W^{5+} 4f_{7/2}$	W^{5+} (%)	W^{6+} (%)
W-KIT-6	38.0	35.9	37.3	35.2	20.6	79.4
W-Al-KIT-6-10	38.3	36.2	37.0	34.9	37.5	62.5

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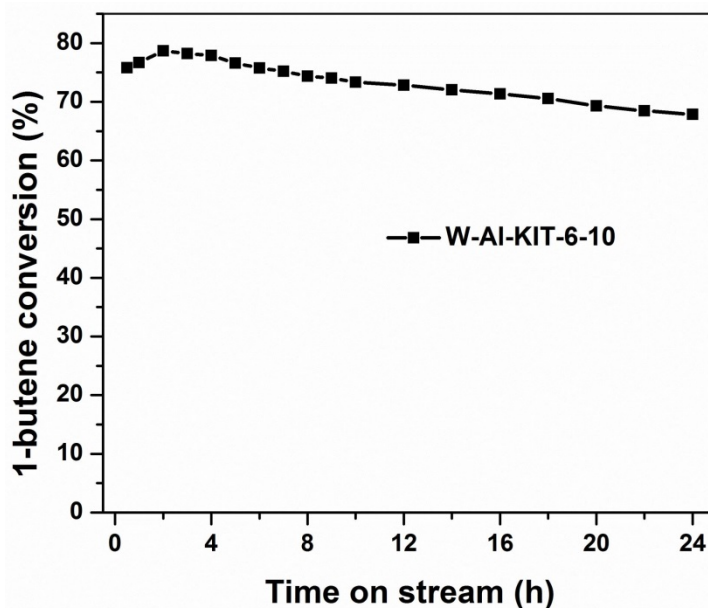


Figure S1 Time-on-stream 1-butene conversion of W-Al-KIT-6-10 catalyst. Reaction conditions: catalyst weight-1.0 g; T=450 °C; P=0.1 MPa; WHSV=0.8 h⁻¹; C₂H₄/1-C₄H₈=2.

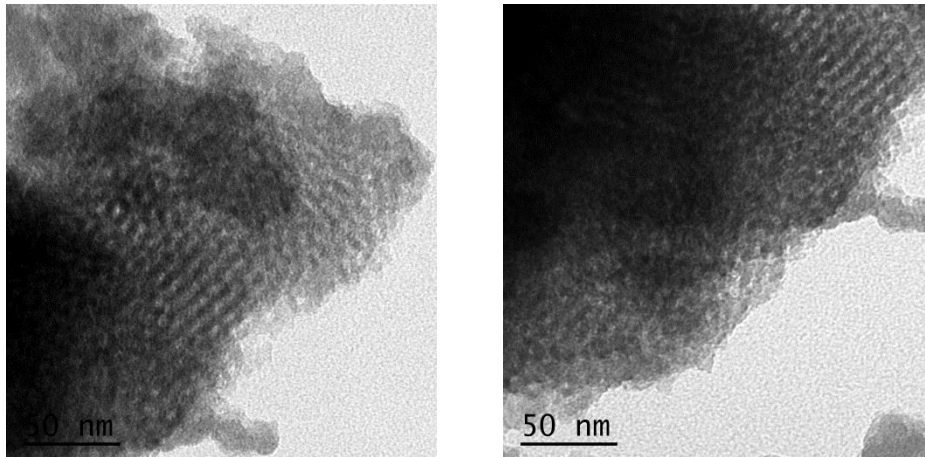


Figure S2 TEM images of spent W-Al-KIT-6 catalyst at different locations.