

**Influence of Mo modification on coaromatization of methanol and n-hexane over [ZnMo]/HZSM-5 catalyst**

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**Table S1** XRD lattice constants for synthesized [Zn,Mo]/HZ-5

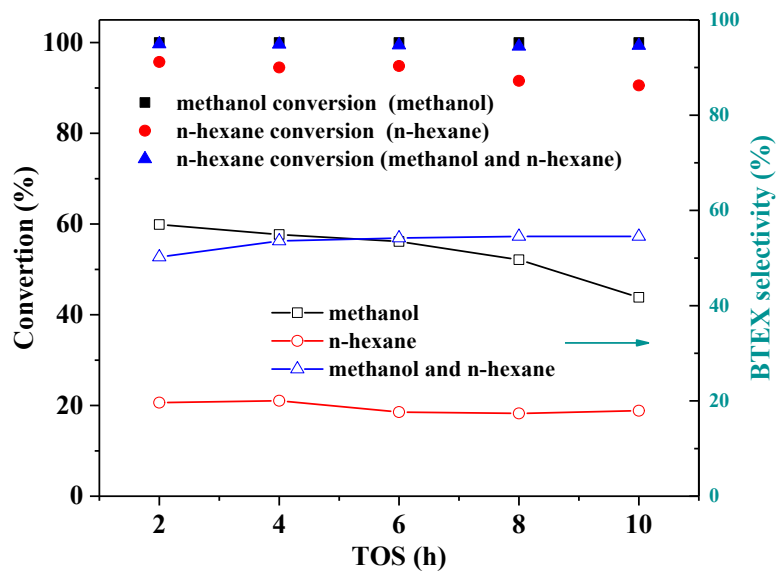
Sample	Cell parameters					
	a	b	c	$\alpha$	$\beta$	$\gamma$
HZ-5	20.10	19.92	13.39	90	90	90
Zn/HZ-5	20.14	19.95	13.43	90	90	90
Zn-1Mo/HZ-5	20.15	19.94	13.43	90	90	90
Zn-3Mo/HZ-5	20.12	19.93	13.41	90	90	90
Zn-5Mo/HZ-5	20.13	19.92	13.40	90	90	90

**Table S2.** Acidity determined by NH<sub>3</sub>-TPD

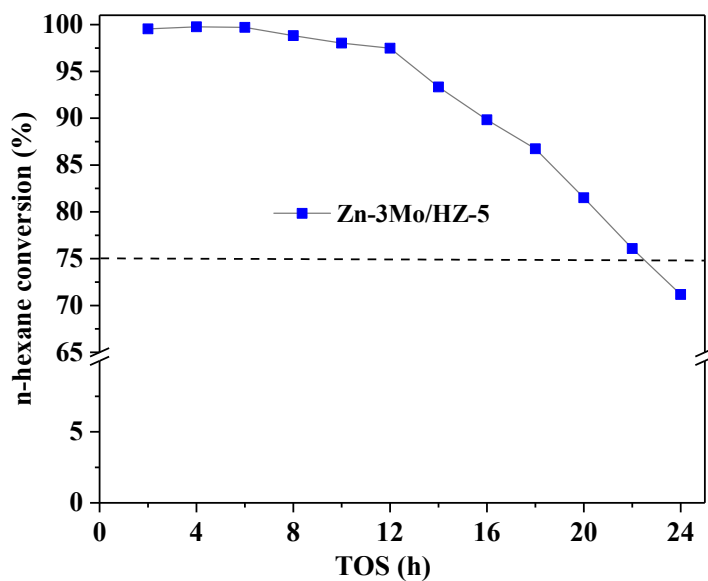
Catalyst	WAS		SAS		Total
	T(°C)	amount (mmol/g)	T(°C)	amount (mmol/g)	amount (mmol/g)
	HZ-5	198	0.452	423	0.280
Zn/HZ-5	197	0.436	413	0.078	0.514
Zn-1Mo/HZ-5	208	0.474	410	0.048	0.522
Zn-3Mo/HZ-5	196	0.495	402	0.037	0.532
Zn-5Mo/HZ-5	195	0.545	415	0.010	0.555

**Table S3** Textural properties of the spent HZ-5, spent Zn/HZ-5 and spent Zn-3Mo/HZ-5.

Sample	$S_{\text{BET}}^{[a]}$ (m <sup>2</sup> /g)	$S_{\text{mic}}$ (m <sup>2</sup> /g)	$S_{\text{ext}}^{[b]}$ (m <sup>2</sup> /g)	$V_{\text{total}}$ (cm <sup>3</sup> /g)	$V_{\text{mic}}$ (cm <sup>3</sup> /g)	$V_{\text{meso}}^{[c]}$ (cm <sup>3</sup> /g)
spent HZ-5	296.1	255.5	40.6	0.19	0.11	0.08
spent Zn/HZ-5	247.7	220.9	26.8	0.14	0.10	0.04
spent Zn-3Mo/HZ-5 (10h)	218.2	187.3	30.9	0.16	0.08	0.08
spent Zn-3Mo /HZ-5 (24h)	138.4	116.4	21.7	0.12	0.05	0.07



**Fig. S1** Conversion and BTEX selectivity for different feedstocks. Reaction conditions: T=470 °C, WHSV=1.0 h<sup>-1</sup>, TOS=2 h)



**Fig. S2.** n-hexane conversion over Zn-3Mo/HZ-5 catalyst. Reaction conditions: methanol/n-hexane = 7:3, T = 470 °C, and WHSV = 1.0 h<sup>-1</sup>.