

*Supplementary Information*

**Influence of metal oxide and heteropoly tungstate location in mesoporous silica towards catalytic transfer hydrogenation of furfural to  $\gamma$ -valerolactone**

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Table S1: Textural properties of SBA-15 and modified catalysts

S.No	Catalyst	SA (m <sup>2</sup> /g)	Vp (cm <sup>3</sup> /g)	Dp (nm)	d <sub>100</sub> (nm)	a <sub>0</sub> (nm)	t <sub>w</sub> (nm)
1	SBA-15	673	0.96	7.82	9.32	10.98	3.16
2	20%ZrO <sub>2</sub> -SBA-15	542	0.81	7.18	9.22	10.65	3.47
3	10%TPA-SBA-15	583	0.86	7.38	9.26	10.69	3.34
4	20%ZrO <sub>2</sub> /10%TPA	462	0.58	7.18	9.22	10.65	3.47
-	SBA-15						
5	10%TPA/20%ZrO <sub>2</sub>	445	0.44	6.28	9.19	10.61	4.33
-	SA-SBA-15						

surface area, Vp- total pore volume calculated from BET method, Dp -pore diameter calculated

from BJH method,  $d_{(100)}$ - d-spacing,  $a_0$ - unit cell parameter calculated from Low angle XRD,  $t_w$ - pore wall thickness calculated using  $a_0$ -Dp

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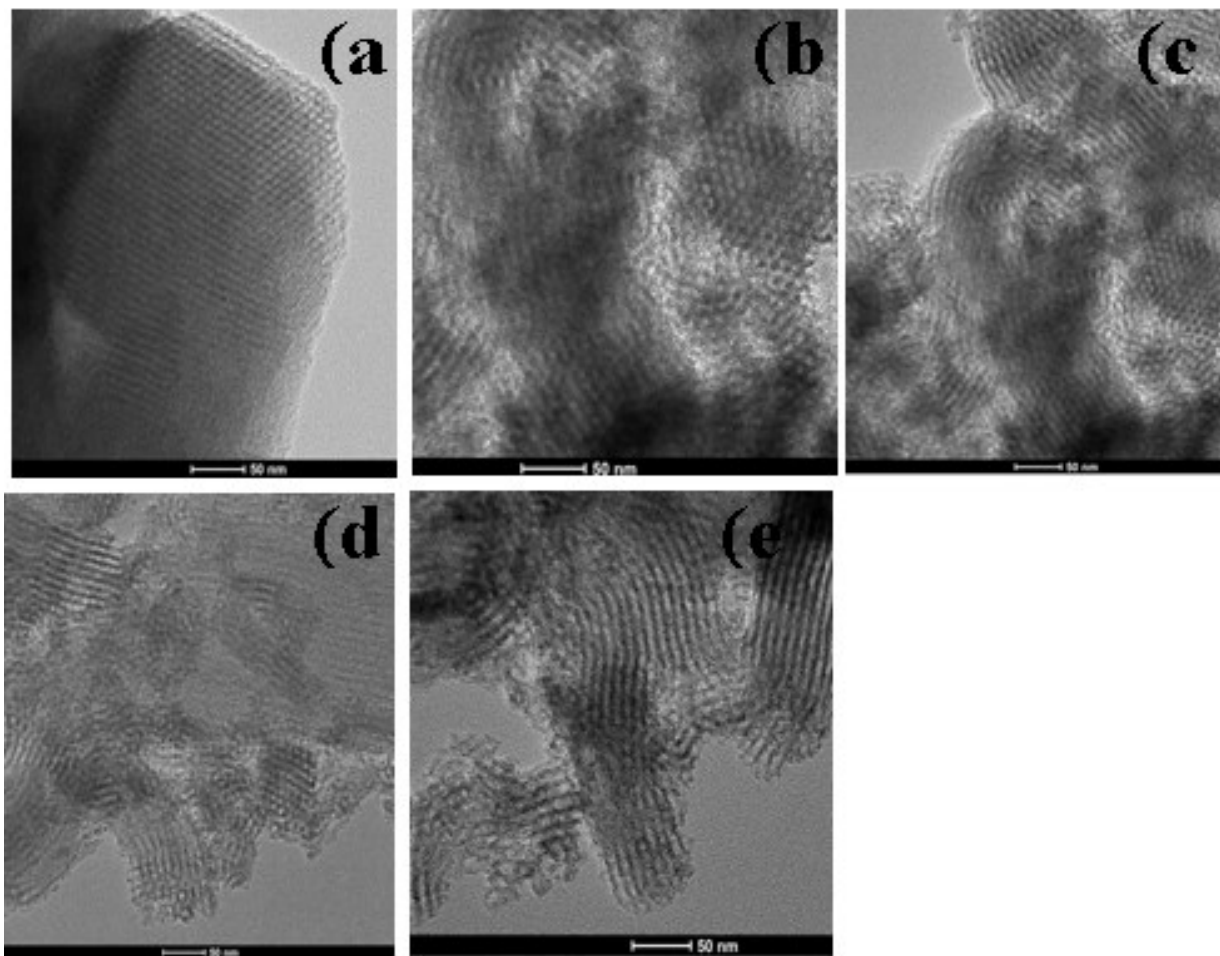


Fig. S1. TEM images of (a) SBA-15, (b) 10%TPA-SBA-15, (c) 20%ZrO<sub>2</sub>/10%TPA-SBA-15, (d) 20%ZrO<sub>2</sub>-SBA-15 (e) 10%TPA/20%ZrO<sub>2</sub>-SBA-15.

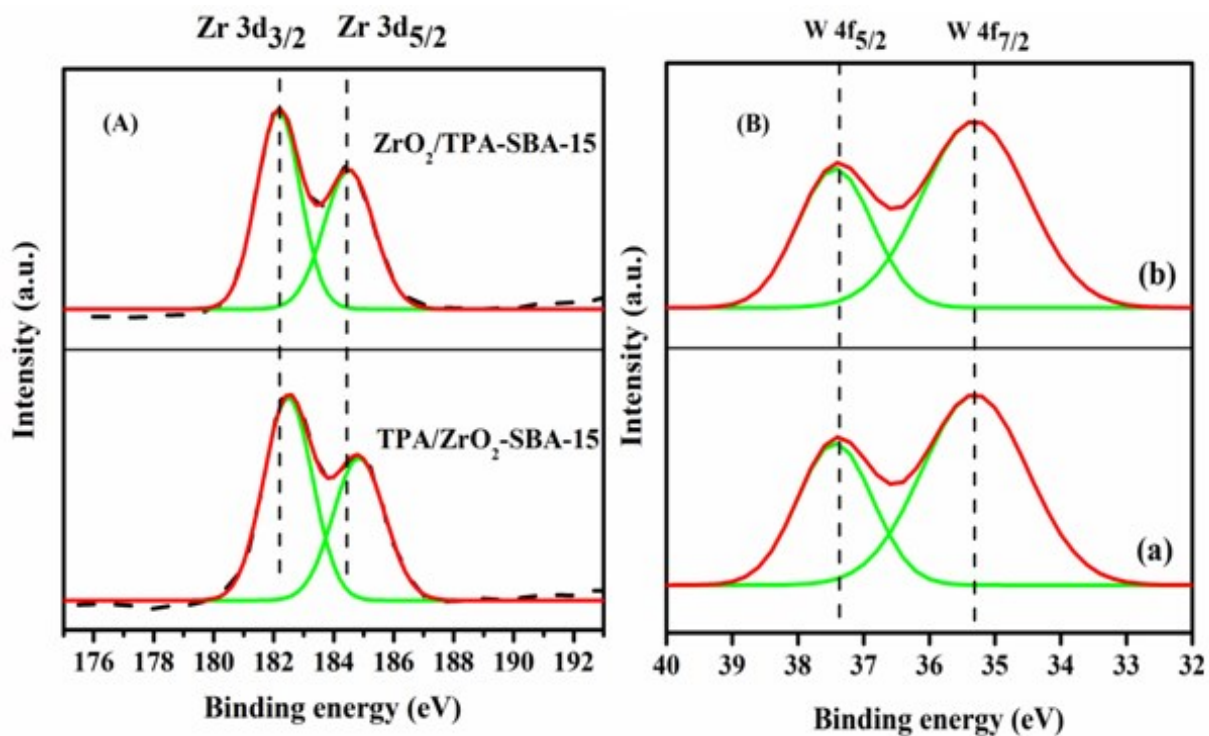


Fig. S2. XPS spectra of the catalysts. (A) Zr 3d, (B) W4f