Supporting Information

Microwave-assisted depolymerization of lignin with synergic alkali catalysts and transition metal catalyst in the aqueous system

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Number of pages: 7

Number of figures: 4

Number of tables: 1

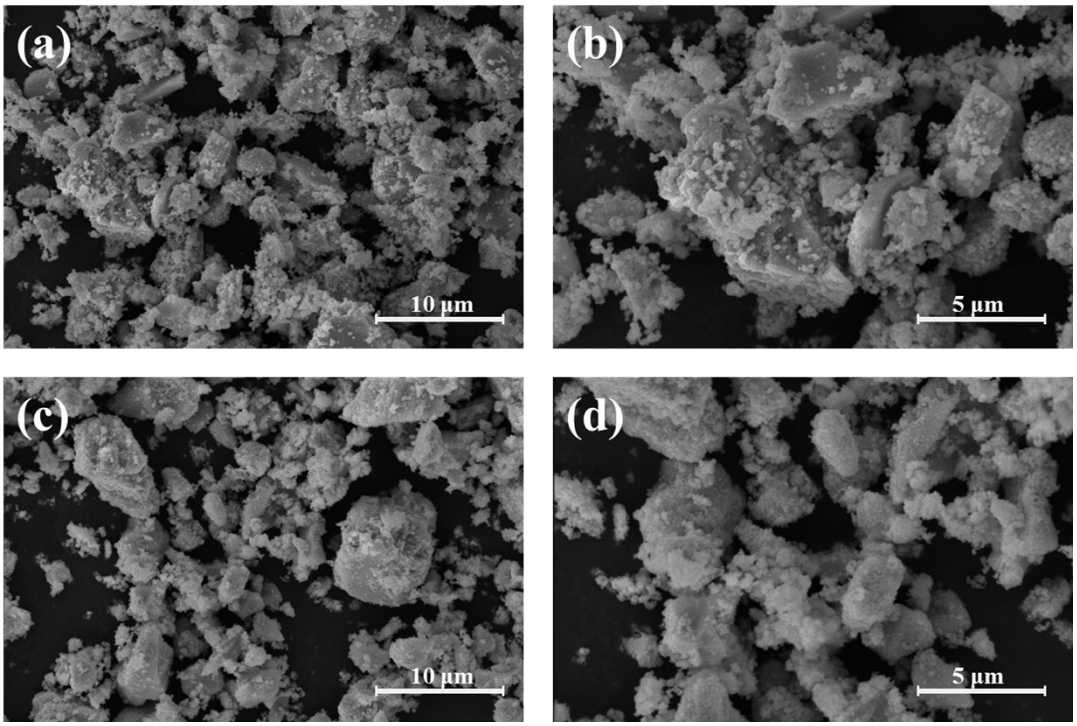

Fig.S1 The SEM image of catalysts: (a) (b) ZrO_2, (c) (d) Ni/ZrO_2

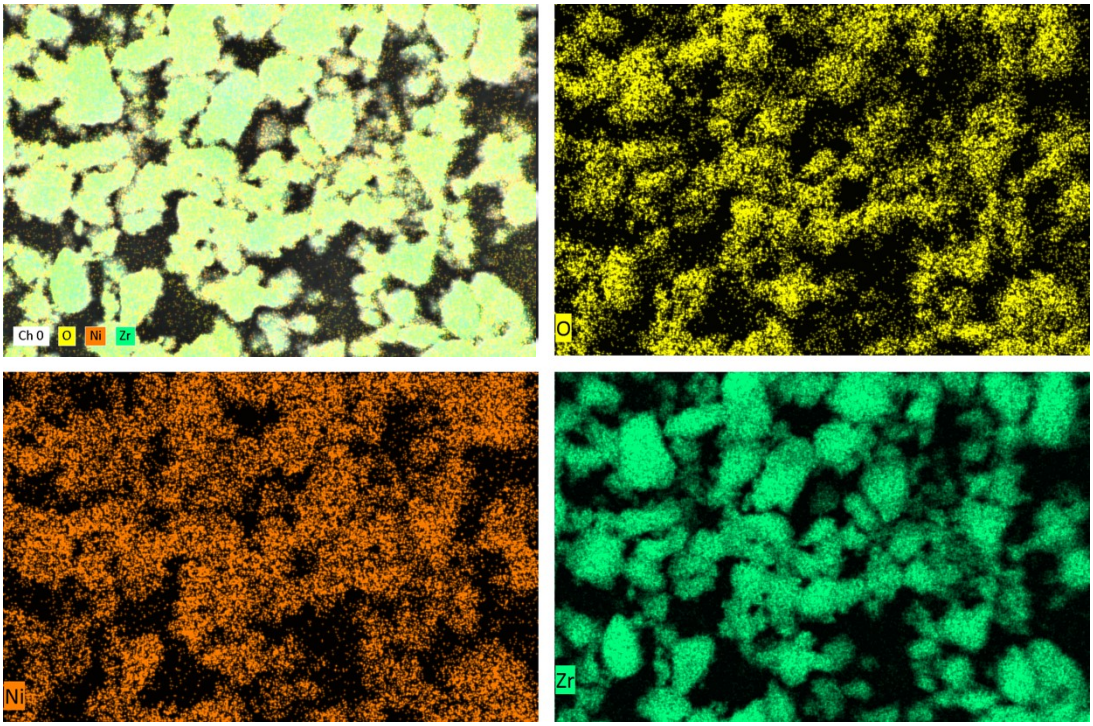

Fig.S2 The mapping of Ni/ZrO_2

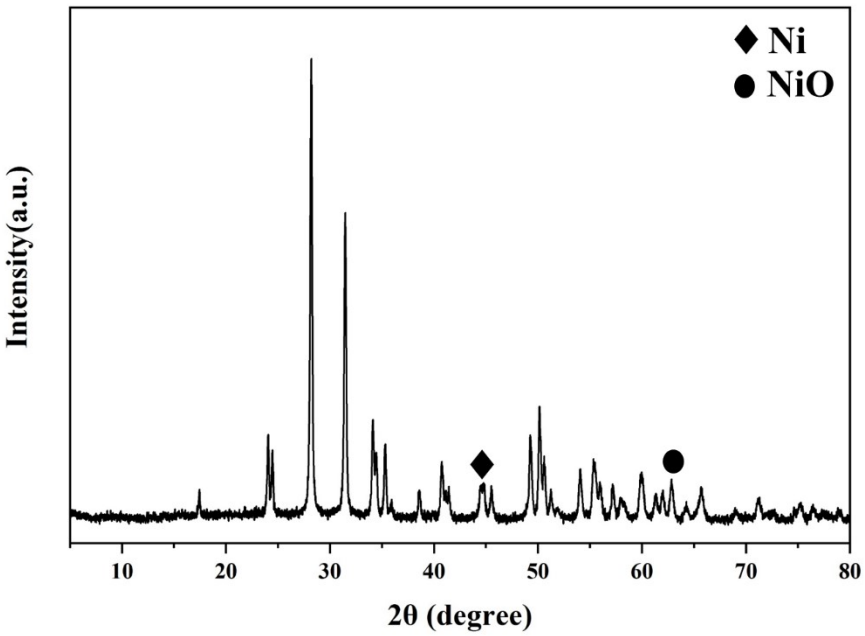

Fig.S3 The XRD pattern of Ni/ZrO_2

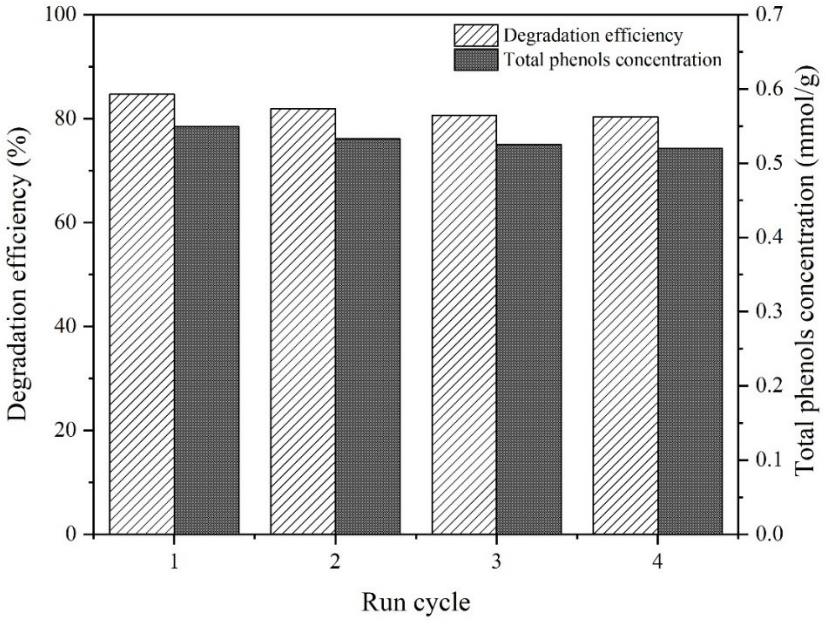

Fig. S4. Recyclability test of the Ni /ZrO_2 catalyst for depolymerization of lignin.

Table S1. The lignin depolymerization reaction conditions of current investigations

Entry	Catalysts	Temperature(℃)	Initial pressure(Mpa)	Reference
1	Ni/Al_2O_3	300	5	[1]
2	Ni/HZSM-5	200	5	[2]
3	Ni-Fe/CNT	300	3	[3]
4	Ni/TiN	250	1	[4]
5	Ni_1Fe_1/AC	225	2	[5]
6	$Ni_{10}Cu_5/C$	270	1	[6]
7	Ni/ZrO_2+NaOH+$NaAlO_2$	180	Atmospheric pressure	This study

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