

Supplementary Materials

Catalysts based on Ni(Mg)Al-layered hydroxides prepared by mechanochemical method for the reaction of furfural hydrogenation

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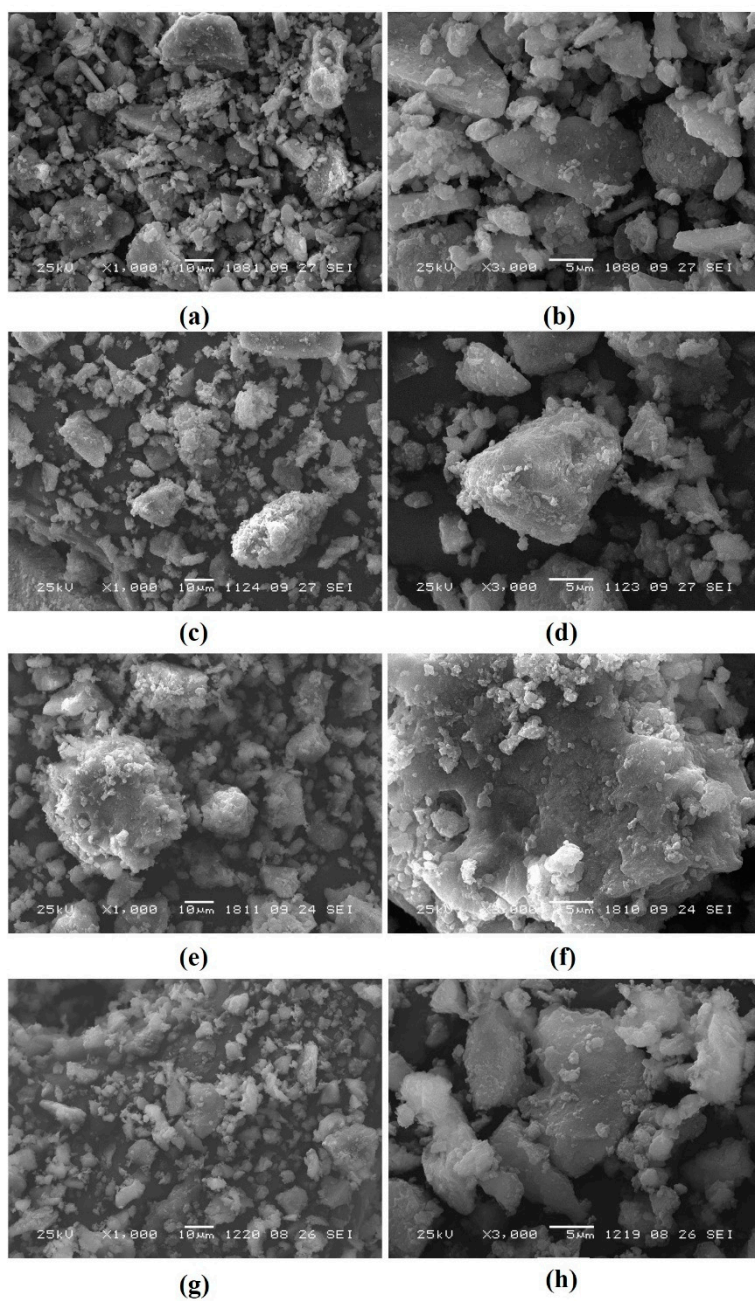


Figure S1. SEM images of the samples: 1 (a, b) – NiAl-3, 2 (a, b) – NiAl-4, 3 (a, b) – 0.5NiMgAl-4, 4 (a, b) – 0.3NiMgAl-4.

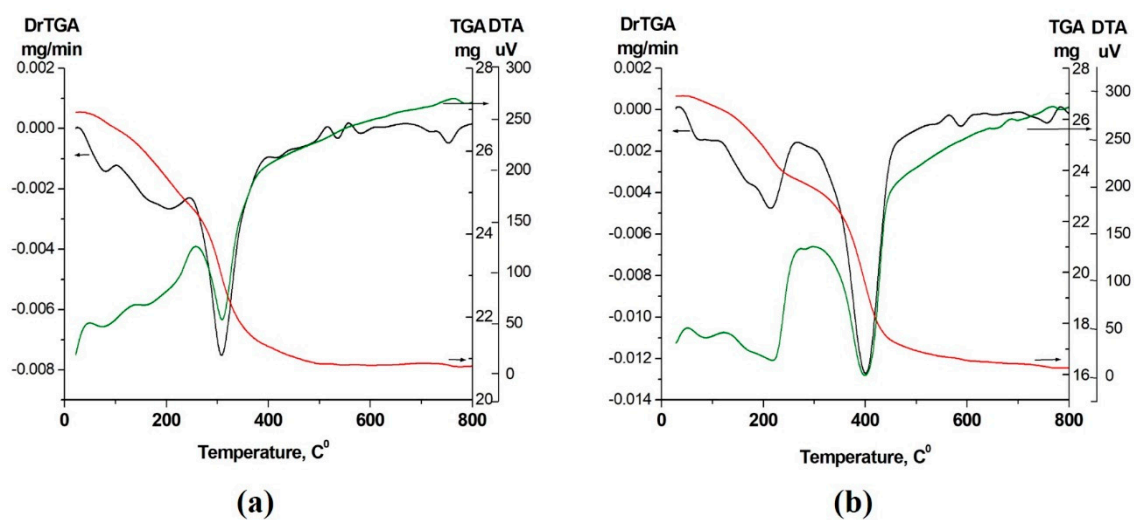


Figure S2. Curves of TG (red line), DrTG (black line), DTA (green line) of the samples: a – NiAl-4, b – 0.3NiMgAl-4.

Table S1. Yield of products of the reaction of FAL hydrogenation in the presence of Ni(Mg)Al-Red catalysts with different Ni/(Ni+Mg) and (Ni+Mg)/Al molar ratio (90°C, 2.0 MPa, stirring 1400 rpm, reaction time 220 min)

Sample	(Ni+Mg)/Al	Ni/(Ni+Mg)	Yield, %			
			FOL	THFOL	THFAL*	Other products
0.1NiMgAl-2-R	2	0.1	14.6	2.6	0.6	1.4
0.3NiMgAl-2-R		0.3	39.7	59.0	0.5	0.2
0.5NiMgAl-2-R		0.5	55.0	27.1	0.2	0.7
0.7NiMgAl-2-R		0.7	38.0	3.3	1.7	0.0
NiAl-2-R		1	46.0	5.0	2.0	0.0
0.3NiMgAl-3-R	3	0.3	40.0	24.9	13.0	0.1
0.5NiMgAl-3-R		0.5	38.3	60.7	0.0	0.0
NiAl-3-R		1	45.6	4.6	1.8	0.0
0.3NiMgAl-4-R	4	0.3	42.6	57.2	0.0	0.0
0.5NiMgAl-4-R		0.5	30.0	69.4	0.0	0.0
NiAl-4-R		1	45.0	3.8	2.4	0.8