

## Supporting information for

# One-pot self-assembly synthesis of Ni-doped ordered mesoporous carbons for quantitative hydrogenation of furfural to furfuryl alcohol

Yiwei Tang <sup>a</sup>, Mo Qiu <sup>a</sup>, Jirui Yang <sup>a</sup>, Feng Shen <sup>a</sup>, Xiaoqi Wang <sup>a</sup>, Xinhua Qi <sup>b, c\*</sup>

<sup>a</sup> *Agro-Environmental Protection Institute, Chinese Academy of Agricultural Sciences, No. 31, Fukang Road, Nankai District, Tianjin 300191, China*

<sup>b</sup> *College of Environmental Science and Engineering, Nankai University, No. 38, Tongyan Road, Jinnan District, Tianjin 300350, China.*

<sup>c</sup> *National & Local Joint Engineering Research Center of Biomass Resource Utilization, Tianjin 300350, China.*

Corresponding Author:

Email: [qixinhua@nankai.edu.cn](mailto:qixinhua@nankai.edu.cn) (X. Qi); Tel (Fax): 86-22-2350-8807

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\* Corresponding author. Email: [qixinhua@nankai.edu.cn](mailto:qixinhua@nankai.edu.cn) (X. Qi); Tel (Fax): 86-22-2350-8807.

Table S1 The properties of Ni<sub>0.5</sub>@OMC samples of different calcination temperatures.

Entry	Catalysts	S <sub>BET</sub> <sup>a</sup> (m <sup>2</sup> g <sup>-1</sup> )	V <sub>M</sub> <sup>b</sup> (cm <sup>3</sup> g <sup>-1</sup> )	W <sub>M</sub> <sup>c</sup> (nm)	D <sub>Ni</sub> <sup>d</sup> (nm)	Ni content <sup>e</sup> (wt%)
1	Ni <sub>0.5</sub> @OMC-600	538.6	0.46	3.71	7.8	17.8
2	Ni <sub>0.5</sub> @OMC-700	519.8	0.46	3.72	12.8	22.6
3	Ni <sub>0.5</sub> @OMC-800	512.2	0.41	3.94	20.4	25.4

<sup>a</sup> The specific surface area was calculated using BET model.

<sup>b</sup> The mesopore volume (V<sub>M</sub>) was determined using BJH model.

<sup>c</sup> The centered pore diameter (W<sub>M</sub>) was calculated with the BJH model

<sup>d</sup> Ni particle size was calculated by using the Scherrer equation based on XRD.

<sup>e</sup> Obtained by the ICP-OES measurement

Table S2 The polar parameters of different solvents and FFA, and the reaction rate constants of catalytic hydrogenation of furfural to FFA by Ni<sub>0.5</sub>@OMC-600 in different solvents

Entry	Solvent	E <sub>T</sub> (30) <sup>a</sup> (kcal mol <sup>-1</sup> )	K <sup>b</sup> × 10 <sup>-2</sup> ( h <sup>-1</sup> )
1	H <sub>2</sub> O	63.1	4.89
2	methanol	55.5	3.83
3	ethanol	51.9	2.34
4	1-propanol	50.7	1.93
5	2-propanol	48.6	1.27

<sup>a</sup> E<sub>T</sub>(30) is Dimroth–Reichardt’s polarity parameter<sup>1</sup>. <sup>b</sup> Reaction conditions: 3 mmol of furfural, 100 mg Ni<sub>0.5</sub>@OMC-600, 10 ml of solvent, 160 °C and 3MPa H<sub>2</sub>.

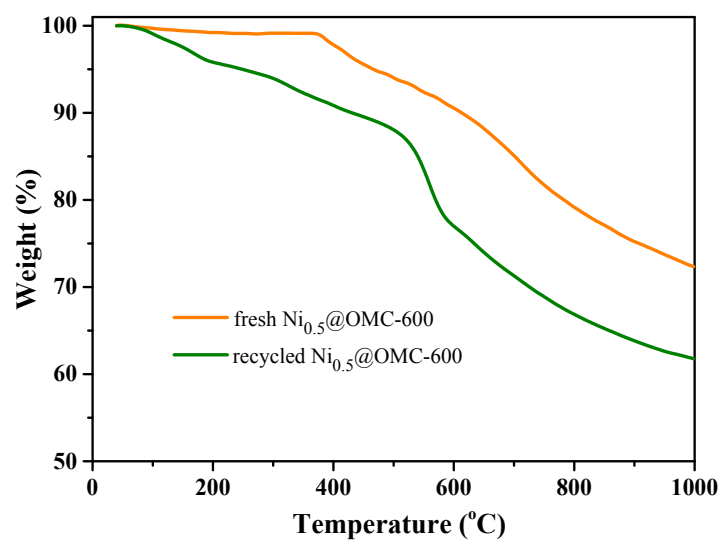


Figure S1. TG analysis of the fresh and recycled catalysts

## References

1. C. Reichardt, *Angew. Chem. Int. Ed.*, 1979, 18, 98-110.