

**SUPPLEMENTARY MATERIALS**

# **Ni-Cu/Al<sub>2</sub>O<sub>3</sub> from Layered Double Hydroxides Hydrogenates Furfural to Alcohols**

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Table S1. Selectivity and conversion during furfural hydrogenation in the pressurized SSR and atmospheric PBR reactors.

	Stirred slurry reactor (SSR)			Tubular reactor (PBR)		
	Ni <sub>0.5</sub> Cu <sub>1.5</sub> Al <sub>1</sub> -R	Ni <sub>1</sub> Cu <sub>1</sub> Al <sub>1</sub> -R	Ni <sub>1.5</sub> Cu <sub>0.5</sub> Al <sub>1</sub> -R	Ni <sub>0.5</sub> Cu <sub>1.5</sub> Al <sub>1</sub> -R	Ni <sub>1</sub> Cu <sub>1</sub> Al <sub>1</sub> -R	Ni <sub>1.5</sub> Cu <sub>0.5</sub> Al <sub>1</sub> -R
Conversion	100.	100.	100.	91	99	99
FA	22	9.2	24	57	61	58
FUR	13	5.3	1.4	9.9	11	7.4
mFUR	12	4.3	2.7	6.9	1.5	1.0
TFA	32	63	56	2.3	2.3	2.1
THF	0.3	0.9	1.0	2.6	2.1	0.2
mTHF	3.3	2.4	1.2	1.0	0.5	1.3
12PD	4.3	3.4	2.6	-	-	-
15PD	-	0.2	0.4	-	-	-
1PE	0.2	-	-	0.2	0.3	0.6
1BU	0.2	0.1	0.1	1.6	1.6	11
CP	-	-	-	0.1	0.2	0.3
CPO	-	-	-	0.6	0.8	0.8
TFEE	2.3	5.2	4.8	1.9	-	-
DFE	5.6	3.0	4.3	2.8	2.2	1.0
Other	4.6	2.6	1.7	14	17	16

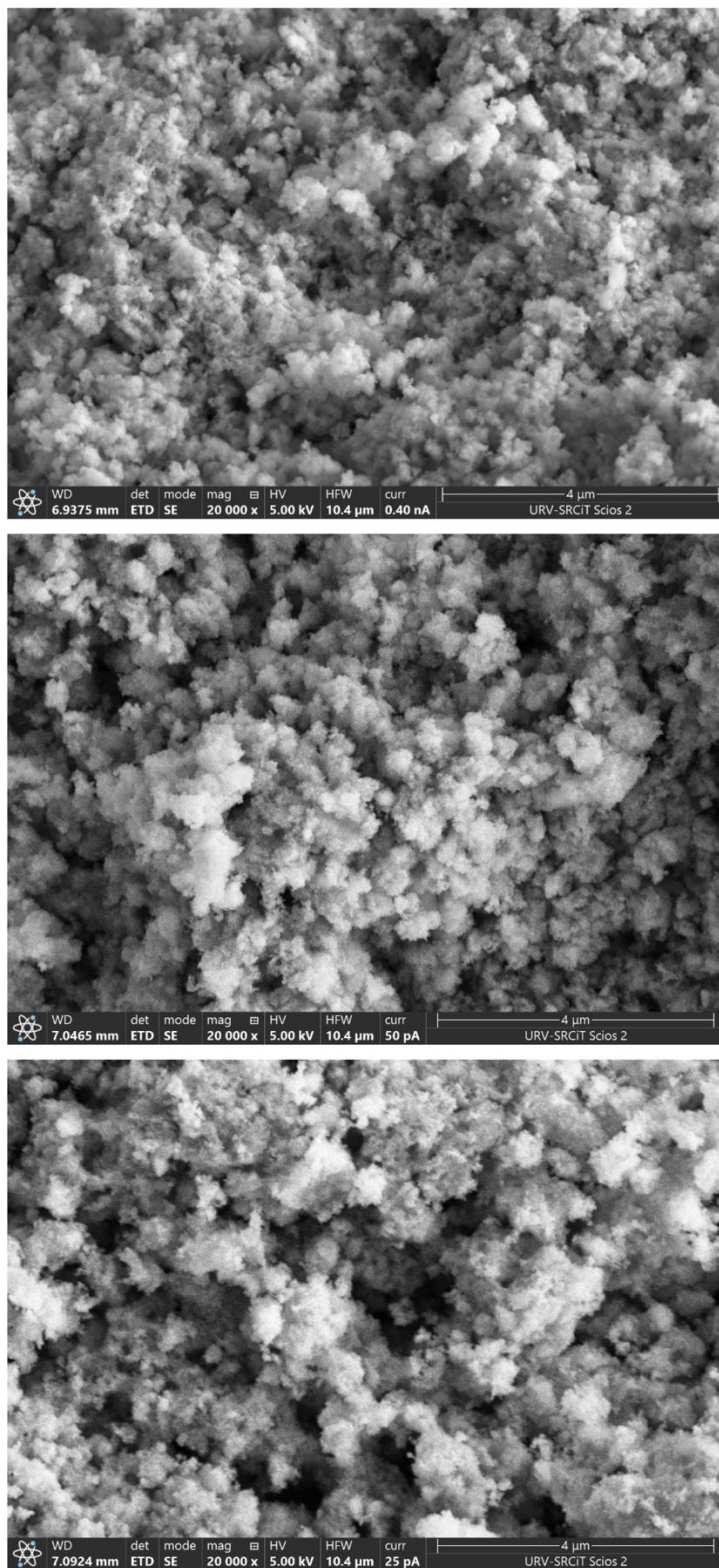


Figure S1. SEM imaging of the calcined materials (20 000 x magnification):  $\text{Ni}_{1.5}\text{Cu}_{0.5}\text{Al}_1$  (top),  $\text{Ni}_1\text{Cu}_1\text{Al}_1$  (center) and  $\text{Ni}_{0.5}\text{Cu}_{1.5}\text{Al}_1$  (bottom)

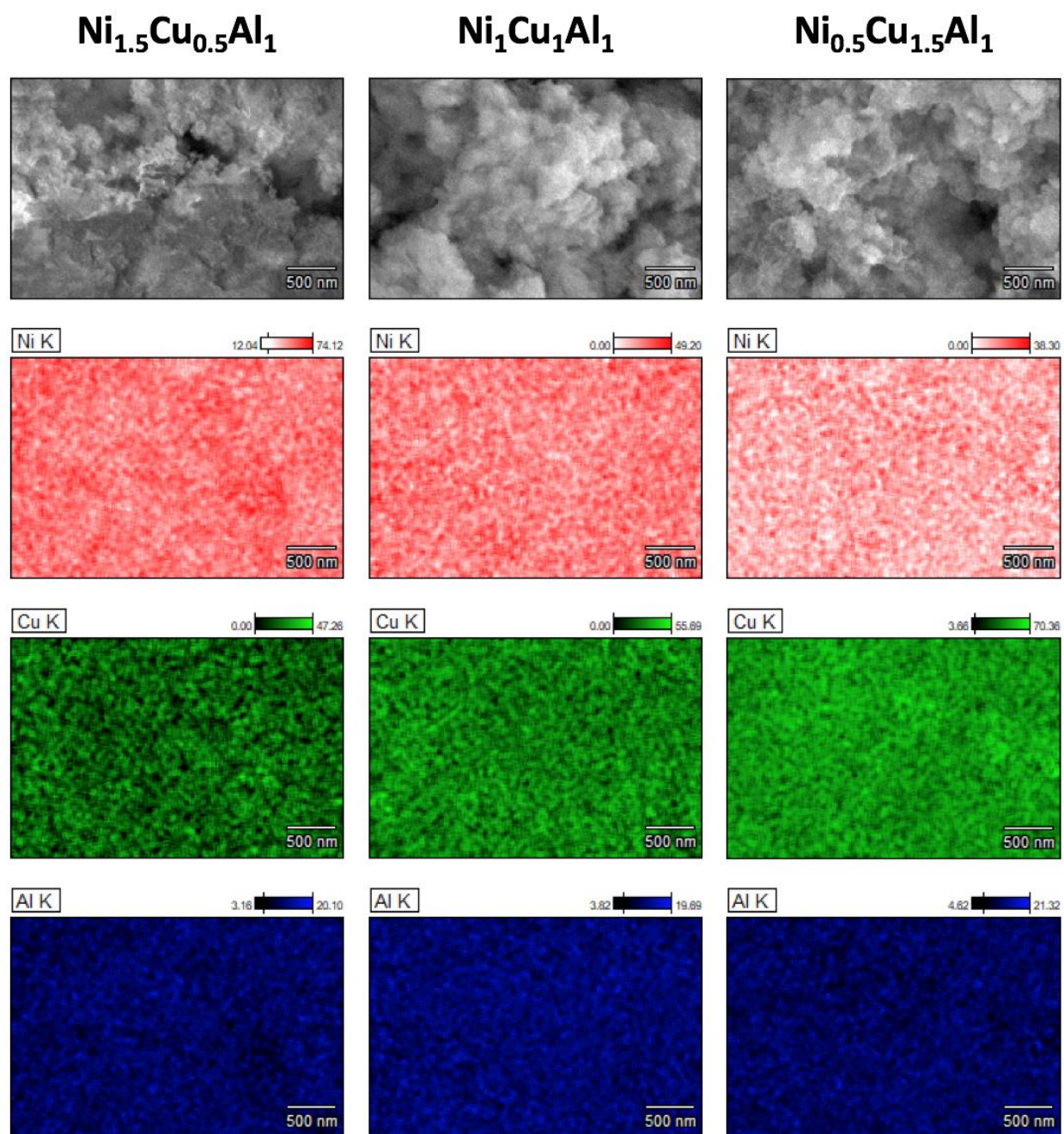


Figure S2. Surface composition of the LDHs precursors calcined at 673 K for 4h measured by EFSEM-EDX

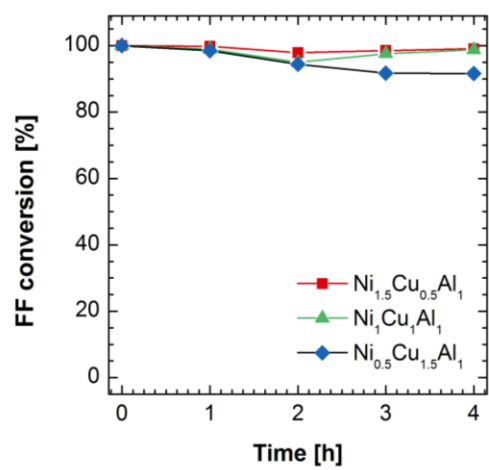


Figure S3. Furfural conversion in the atmospheric PBR at 463 K and a WHSV of  $2.85 \text{ g}_{\text{FF}} \text{ g}_{\text{cat}}^{-1} \text{ h}^{-1}$ .