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# Supplementary information

### 2 Industrial basalt fiber loaded CuNi for continuous synthesis of DMC

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### from CO<sub>2</sub> and methanol

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Fig S1. XRD patterns of fresh catalyst and used catalyst.



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Fig S2 FTIR patterns of fresh catalyst and used catalyst.

19 Table S1 XPS fitting data for all catalysts.

Catalysts	Element (Atomic%)						
	Cu	Ni	Al				
CuNi/BF-U	19.6	27.5	52.9				
CuNi/BF-H	23.0	32.7	44.3				
CuNi/BF-N	33.7	36.1	30.1				

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21 Table S2 ICP test results of all catalysts

Catalysts	Element (Atomic%)									
	Al	Ca	Si	Fe	K	Mg	Na	Ti	Cu	Ni
CuNi/BF-U	15.1	7.4	35.5	6.5	1.0	8.6	11.8	1.1	6.6	6.4
CuNi/BF-H	15.5	7.3	36.9	6.0	1.1	8.3	8.7	1.1	7.9	7.3
CuNi/BF-N	15.0	7.2	30.5	6.5	1.0	8.1	14.5	1.1	8.4	7.7