

## Supplementary Information

# **Enhancing microbial electrosynthesis of acetate and butyrate from CO<sub>2</sub> reduction involving engineered *Clostridium ljungdahlii* with nickel phosphide modified electrode**

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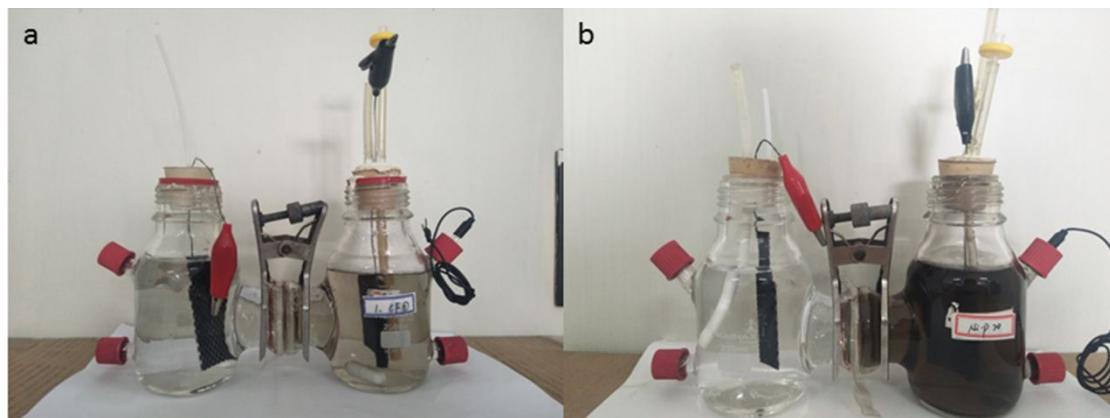
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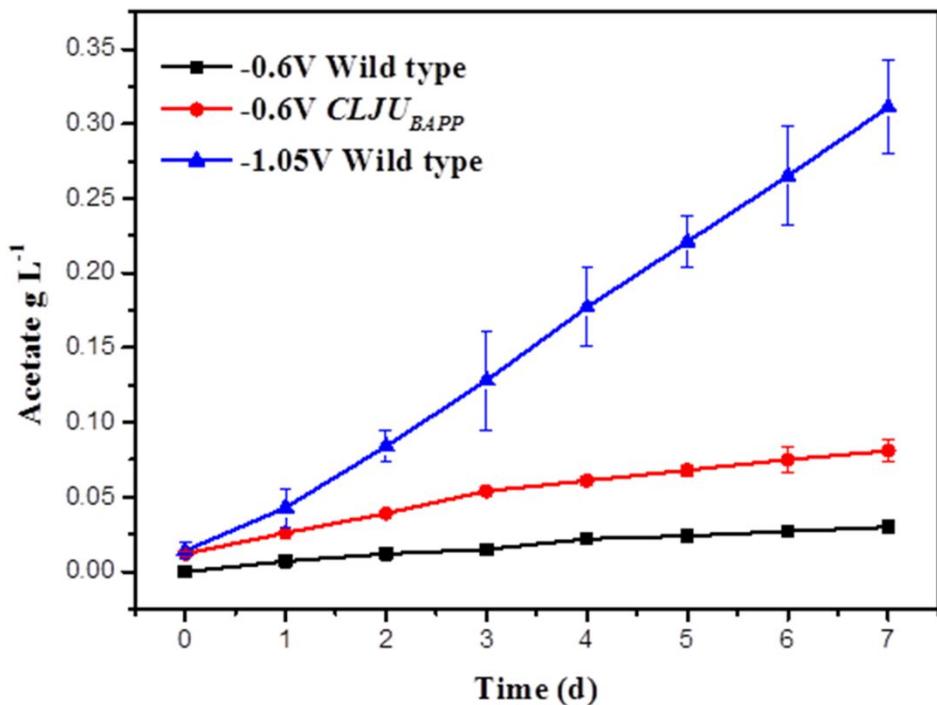
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**Fig.S1** Control (a) and Ni-P<sub>20</sub> (b) in the MES reactor



**Fig.S2** Acetate production by *C. ljungdahlii* wild type and *CLJU<sub>BAPP</sub>* at different cathodic potentials

**Table S1** Product rate of *C. ljungdahlii* wild type and *CLJU<sub>BAPP</sub>* at different cathode potentials

	Acetate ( g L <sup>-1</sup> d <sup>-1</sup> )	Ethanol ( g L <sup>-1</sup> d <sup>-1</sup> )	Butyrate ( g L <sup>-1</sup> d <sup>-1</sup> )
wild type(-0.6V)	0.004	0	0
<i>CLJU<sub>BAPP</sub></i> (-0.6 V)	0.012	0	0
wild type(-1.05V)	0.045	0	0
<i>CLJU<sub>BAPP</sub></i> with CF(-1.05V)	0.10	0.014	0.04