

Electronic Supplementary Information

**Synthesis of 2,5-furandicarboxylic acid from 5-hydroxymethylfurfural by a TEMPO/laccase system coupled with *Pseudomonas putida* KT2440**

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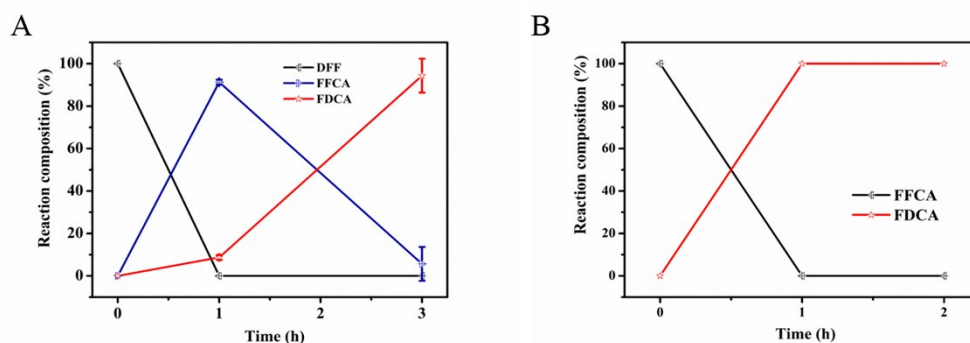
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## Figures and Table Captions

**Fig. S1** DFF and FFCA transformation by *P. putida* KT2440.

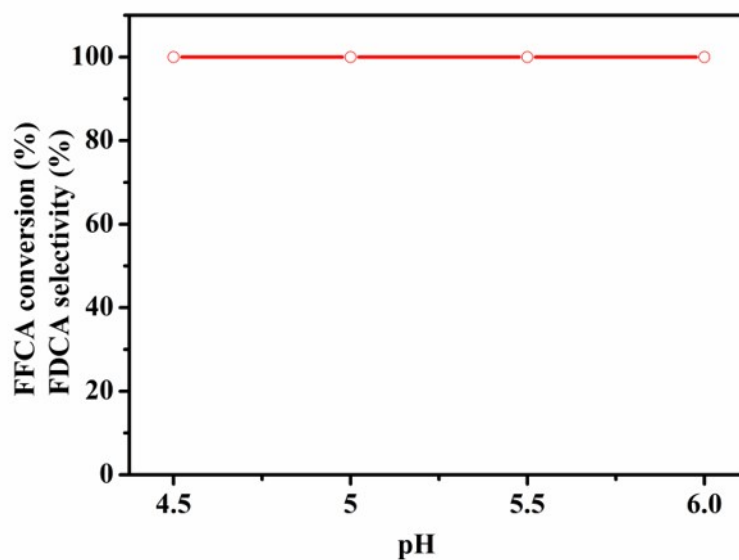
**Fig. S2** Effect of initial pH on the synthesis of FDCA catalyzed by *P. putida* KT2440.

**Table S1.** Effect of concentration of FFCA and buffer on the catalysis of *P. putida* KT2440.



**Fig. S1** DFF and FFCA transformation by *P. putida* KT2440.

Reaction conditions: 50 mM DFF (A) or FFCA (B), 6 mg mL<sup>-1</sup> microbial cells in 20 mL phosphate buffer (200 mM, pH 7.0), 50 mM CaCO<sub>3</sub>, 200 rpm, 30 °C.



**Fig. S2** Effect of initial pH on the synthesis of FDCA catalyzed by *P. putida* KT2440.

Reaction conditions: 100 mM FFCA and 10 mg mL<sup>-1</sup> microbial cells in 5 mL acetate buffer (200 mM), 100 mM CaCO<sub>3</sub>, 200 rpm, 30 °C.

**Table S1.** Effect of the concentrations of FFCA and acetate buffer on the catalysis of *P. putida* KT2440.

Entry	FFCA (mM)	Buffer (mM)	FFCA conversion (%)	FDCA selectivity (%)
1	100	200	100	100
2	150	200	100	100
3	200	200	100	100
4	100	400	100	100
5	150	400	100	100
6	200	400	100	100

Reaction conditions: 100-200 mM FFCA, 10 mg mL<sup>-1</sup> microbial cells in 5 mL acetate buffer (200-400 mM, pH 6), 50-100 mM CaCO<sub>3</sub>, 200 rpm, 30 °C.