Supplemental Information

Relieving the fermentation inhibition enables high electron recovery from landfill leachate in a microbial electrolysis cell

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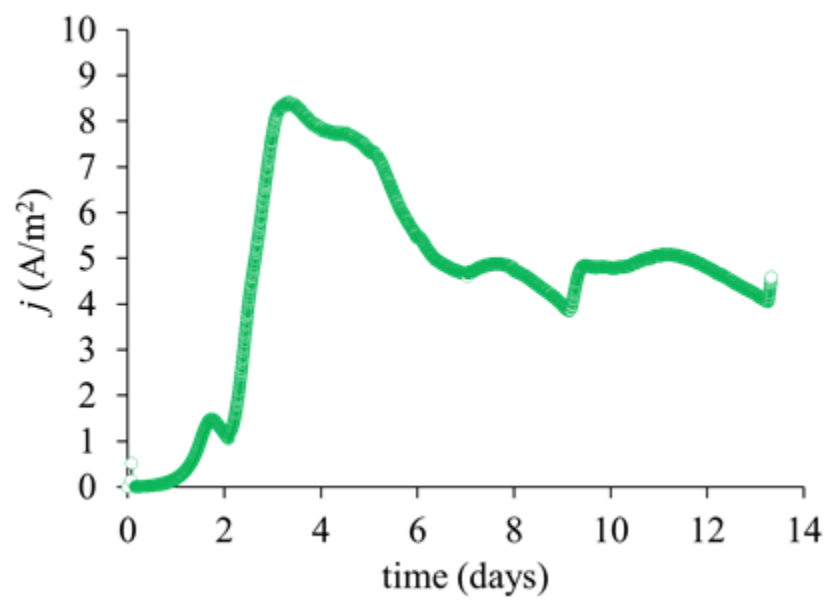Number of Figures: 2

Number of Tables: 1

Figure S1. Current density during the initial period of biofilm formation on the anode.
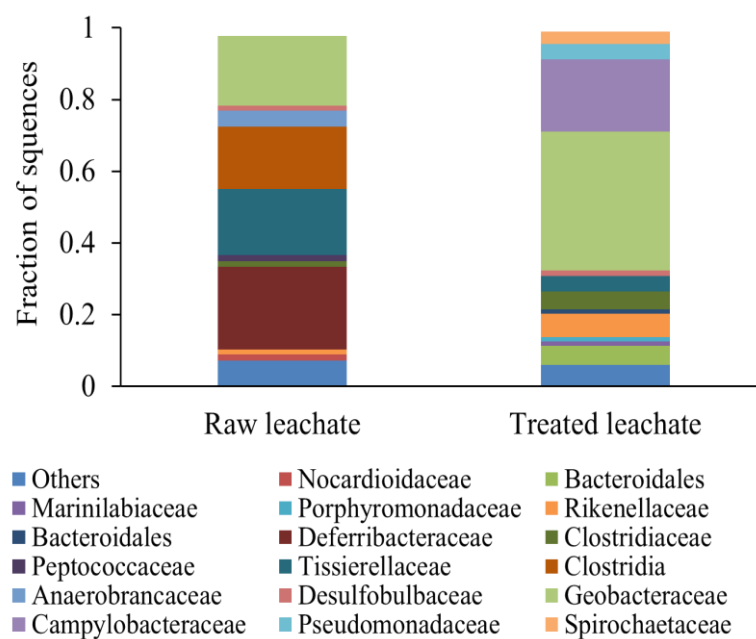
Figure S2. Microbial community distribution for biofilms at the family level.

Table S1. Summary of the Fenton oxidation process

Reaction 1:	$Fe^{2+} + H_2O_2 \rightarrow Fe^{3+} + OH^- + OH^{\bullet}$
Reaction 2:	$Fe^{3+} + H_2O_2 \rightarrow Fe^{2+} + HO_2^{\bullet} + H^+$
Reaction 3:	$H_2O_2 + OH^{\bullet} \rightarrow HO_2^{\bullet} + H_2O$
Reaction 4:	$Fe^{2+} + OH^{\bullet} \rightarrow Fe^{3+} + OH^-$
Reaction 5:	$Fe^{3+} + HO_2^{\bullet} \rightarrow Fe^{2+} + HO_2^+$
Reaction 6:	$Fe^{2+} + HO_2^{\bullet} + H^+ \rightarrow Fe^{3+} + H_2O_2$
Reaction 7:	$HO_2^{\bullet} + HO_2^{\bullet} \rightarrow H_2O_2 + O_2$

Adapted from Duesterberg and Waite (2006) and Deng and Englehardt (2006)

References

Deng, Y. and Englehardt, J.D., 2006. Treatment of landfill leachate by the Fenton process. Water Res. 40, 3683 – 3694.

Duesterberg, C.K., and Waite, T.D., 2006. Process optimization of Fenton oxidation using kinetic modeling. Environ. Sci. Technol. 40, 4189–4195.