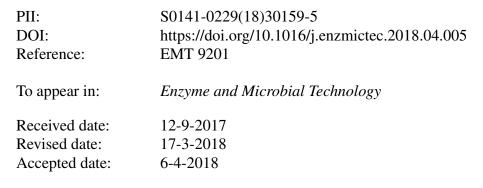
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Shewanella putrefaciens CN32 outer membrane cytochromes MtrC and UndA reduce electron shuttles to produce electricity in microbial fuel cells

Xian Wu^{a,1}, Long Zou^{a,1,*}, Yunhong Huang^a, Yan Qiao^{b,*}, Zhong-er Long^a, Haoping Liu^a, Chang Ming Li^{b,c}

^aCollege of Life Science, Jiangxi Normal University, Nanchang 330022, China.

^bInstitute of Clean Energy & Advanced Materials, Faculty of Materials and Energy, Southwest University, Chongqing 400715, China.

^cInstitute of Materials Science and Devices, Suzhou University of Science and Technology, Suzhou 215011, China.

*Corresponding authors.

E-mail address: zoulong@jxnu.edu.cn (L. Zou) and yanqiao@swu.edu.cn (Y. Qiao). ¹ These authors contributed equally to this work.

Highlights

- Functions of *c*-Cyts MtrC and UndA were investigated via in-frame gene deletion.
- Deletion of *mtrC* gene severely depressed MFC start-up and electricity production.
- MtrC might be the primary reductase towards electron shuttles.
- Flavins-mediated electron transfer is the key factor to MFC performance.

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