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Oxygen reduction reaction activity and the microbial community in response to magnetite coordinating nitrogen-doped carbon catalysts in bioelectrochemical systems

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Abstract

A Fe-N-C catalyst is supposed to drive commercialization of microbial fuel cells (MFCs) because of its remarkable catalytic performance on oxygen reduction reaction (ORR). However, the catalyst suffers from unclear active site structure and unknown responses of the cathodic microbial community. Here, we prepared a mesoporous core-shell structure catalyst with a nitrogen doped matrix carbon shell, and a Fe₃O₄

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