Nickel(II) removal from wastewater by Microbial Fuel Cell

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The effect of the high standard electrode potential of copper ions on the anode of microbial fuel cells was demonstrated in a previous study. This paper studied the effect of the low standard electrode potential of nickel ions on the anode, including removal efficiency, migration and distribution. More than 95% of the nickel can be removed in the anode of MFCs (Microbial fuel cells) with influent feed to the anolyte containing Ni²⁺, while the removal mechanism of nickel ions was chemical precipitation, including approximately 75.5% in the anode and approximately 15% in the cathode.

Keywords: Microbial fuel cells; nickel ions; anode; removal mechanism; metal ions

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