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Use of Microbial Fuel Cell for Metal Recovery from Wastewater

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Abstract : Metal containing wastewater is generated in large quintiles due to rapid industrialization. Generally, the metal present in wastewater is not biodegradable and can be accumulated in living animals, humans and plant tissue, causing disorder and diseases. The conventional metal recovery methods include chemical, physical and biological methods, but these are chemical and energy intensive. The recent development in microbial fuel cell (MFC) technology provides a new approach for metal recovery; this technology offers a flexible platform for both reduction and oxidation reaction oriented process. The use of MFCs will be a new platform for more efficient and low energy approach for metal recovery from the wastewater. So far metal recover was extensively studied using chemical, physical and biological methods. The MFCs present a new and efficient approach for removing and recovering metals from different wastewater, suggesting the use of different electrode for metal recovery can be a new efficient and effective approach.

Keywords : metal recovery, microbial fuel cell, wastewater, bioelectricity
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