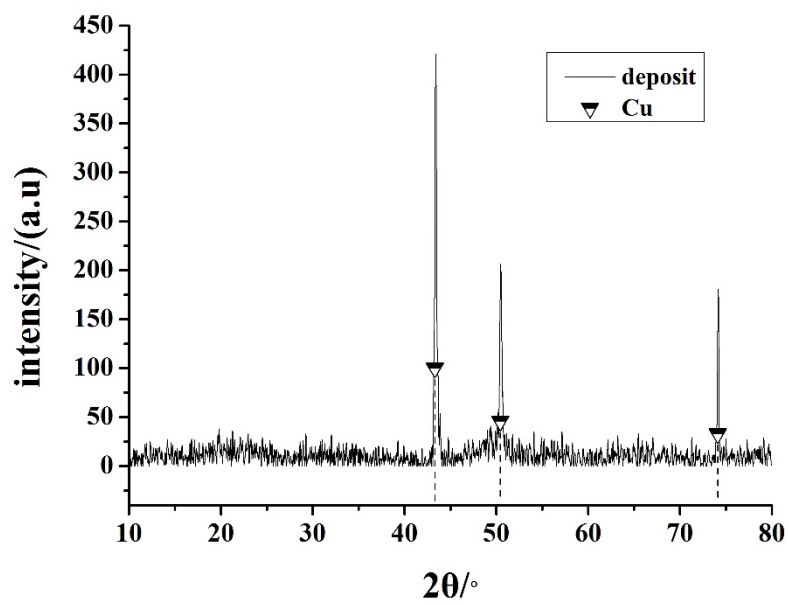
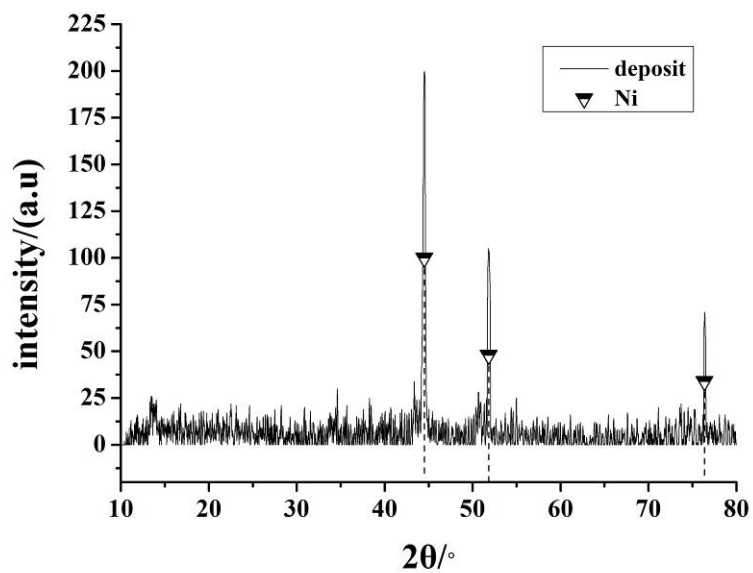


Supporting information



(a)



(b)

Fig. S1 X-ray diffraction pattern of the deposit on cathodes of (a) the MFC and (b) the MEC

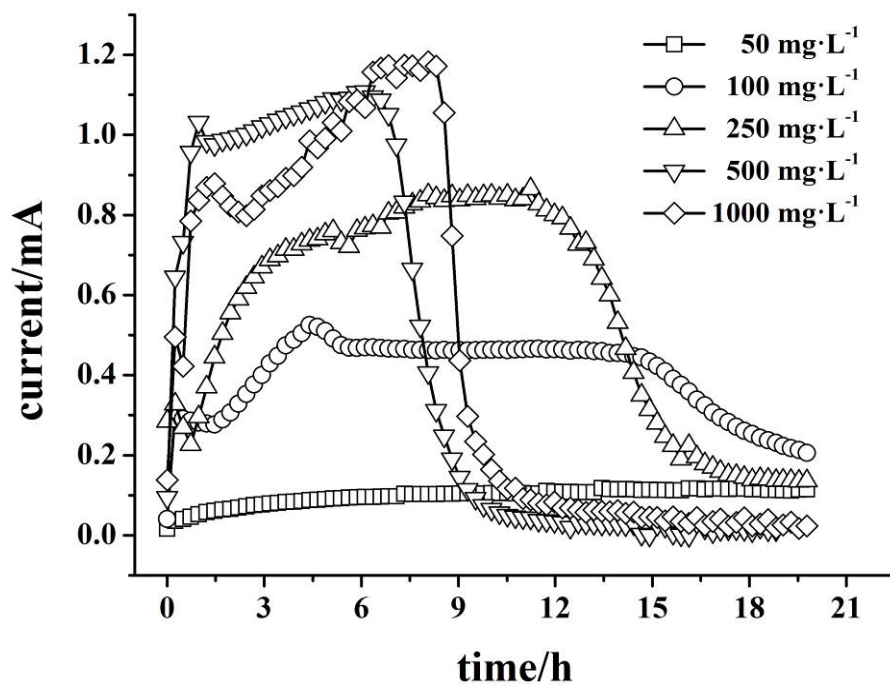


Fig. S2 Current outputs changed with time in the MEC when initial concentrations of Ni²⁺ increased from 50 to 1000 mg·L⁻¹ with an initial Cu²⁺ concentration of 500 mg·L⁻¹

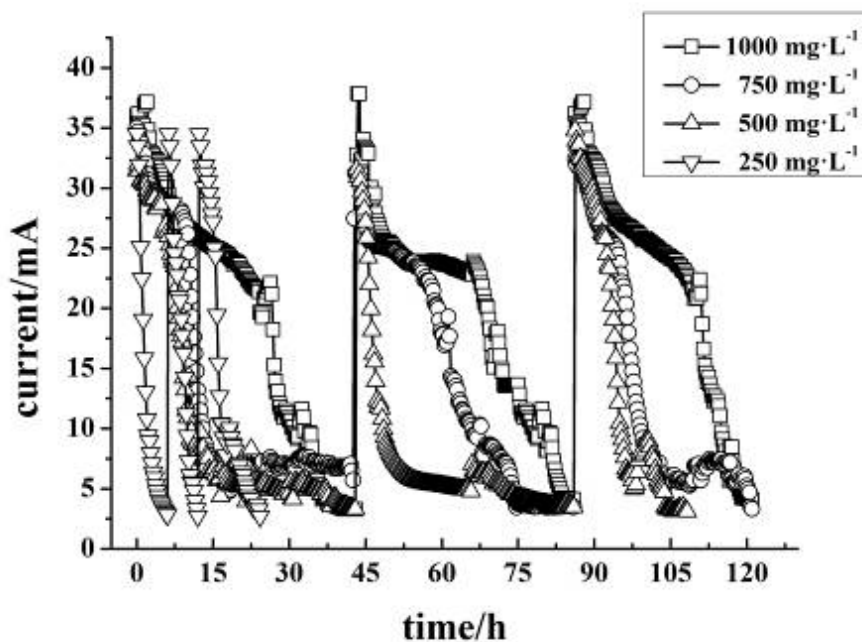


Fig. S3 Current outputs changed with time in MFC when initial concentration of Cu²⁺ increased from 250 to 1000 mg·L⁻¹ with an initial Ni²⁺ concentration of 500 mg·L⁻¹. Arrows showed the electrolyte replacements