

*Supplementary material for*

**A promising process to remove nitrate from solar panel  
production wastewater and meanwhile generating electricity**

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## Captions

**Table S1.** Cost analysis on different methods to treat solar panel production wastewater.

**Figure S1.** The equivalent circuit diagram.

**Figure S2.** CV curve of MFC reactor in each cycle (a) and the  $q^*$  value for each cycle(b).

**Figure S3** Microbial composition on day 1, day 7, day 28 and day 42 at the phylum level.

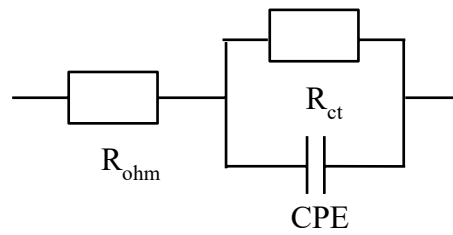
**Table S1**

Cost analysis on different methods to treat solar panel production wastewater.

Technologies	Fe-MFC	Other denitrification equipment
Construction/Material cost (RMB)	-30000	-50000
Electric energy output (kW·h/t wastewater)	+0.33	-
Revenues from electric energy output (RMB/t wastewater)	+0.198	-
Total costs (RMB/t wastewater)	-0.5	-(1.2-2.5)

Note, the unit prices of constructions and materials were collected from suppliers.

**Figure S1**



**Fig. S1 The equivalent circuit diagram**

(The Rohm (Ohmic resistance) referred to the cathode electrolyte resistance, and the Rct (charge transfer or activation resistance) referred to the cathode charge transfer resistance. The constant phase element (CPE) represented the capacitor that was formed at the interface between the rough-faced electrode and its surrounding electrolyte.)

**Figure S2**

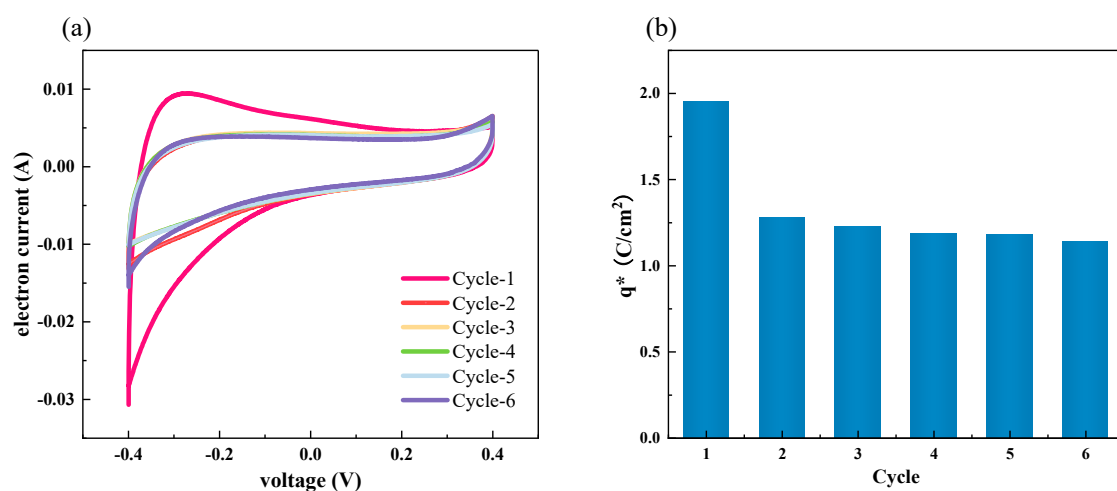


Figure S2 CV curve of MFC reactor in each cycle (a) and the  $q^*$  value for each cycle (b).

Figure S3

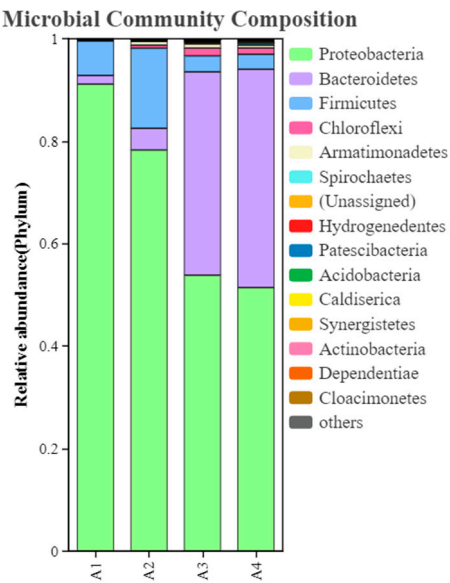


Figure S3 Microbial composition on day 1 (A1), day 7 (A2), day 28 (A3) and day 42 (A4) at the phylum level.