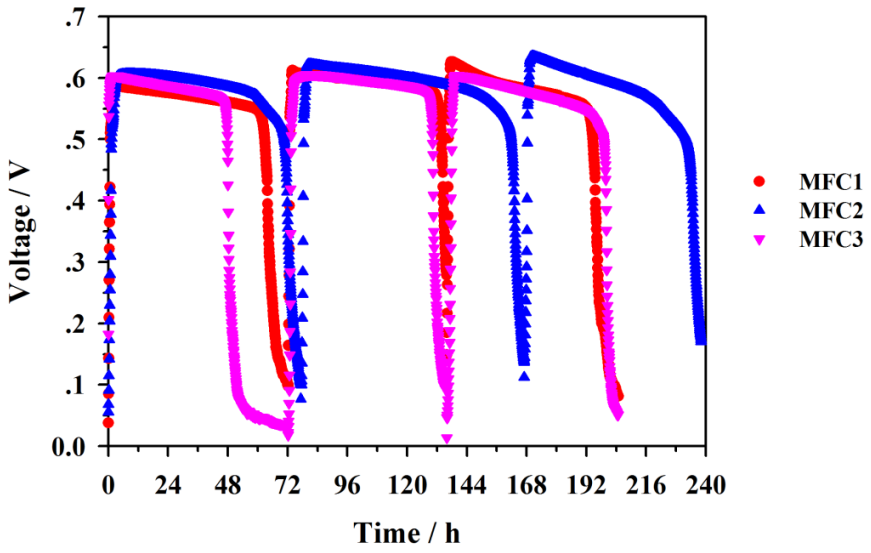
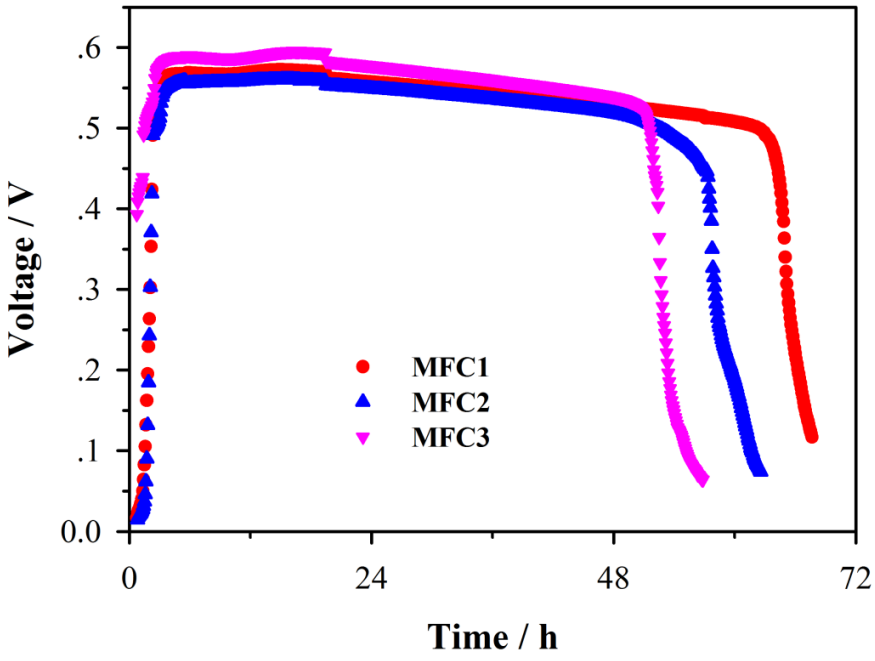
Appendix



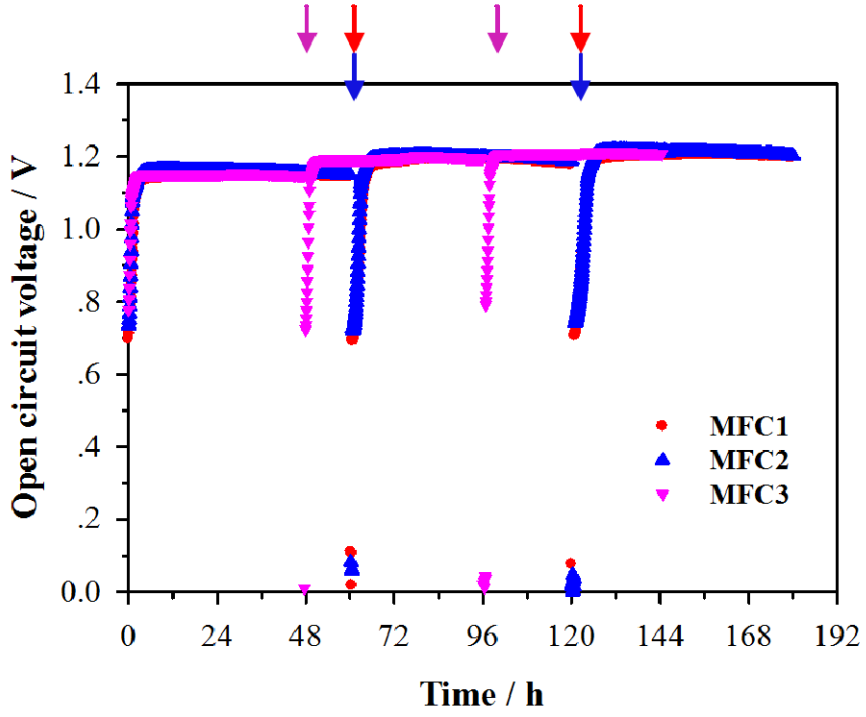
Appendix 1 Voltage of the two-chamber MFCs with a 500 Ω external resistor

Appendix 2 Coulombic efficiencies of two-chamber MFCs (%)

	MFC1	MFC2	MFC3
Cycle1	22.9	26.6	18.3
Cycle2	25.7	35.1	22.7
Cycle3	34.2	33.3	30.4
Average±Standard deviation	27.6±5.9	31.7±4.5	23.8±6.1



Appendix 3 The voltage of the three-chamber MFCs after the reconstruction (with a 500 ohm resistor)

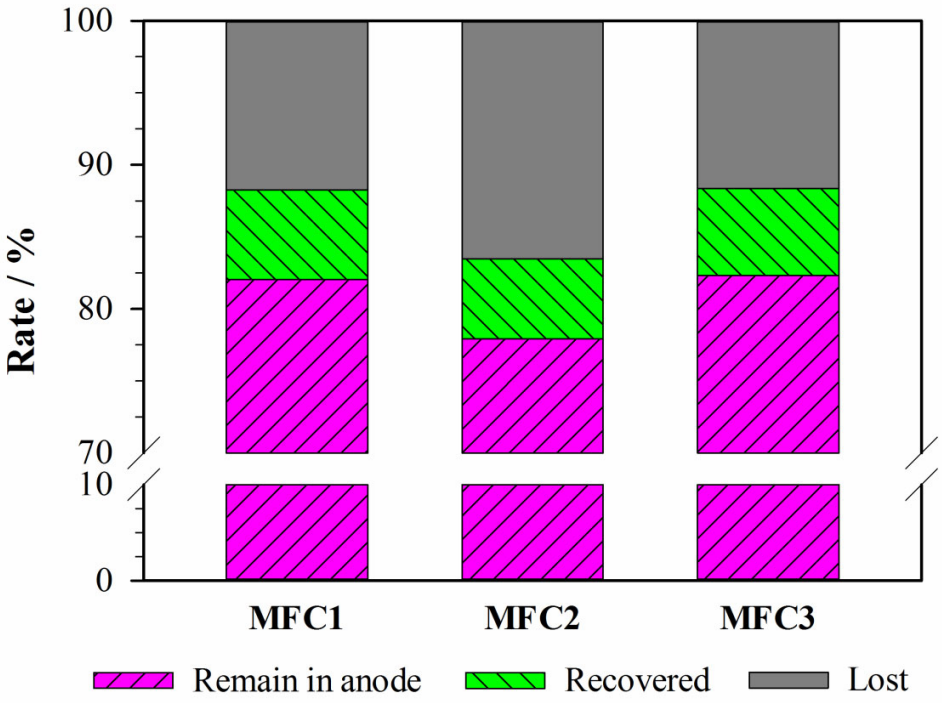


Appendix 4 The open circuit voltage of the three-chamber MFCs. Arrows showed the time of solution change

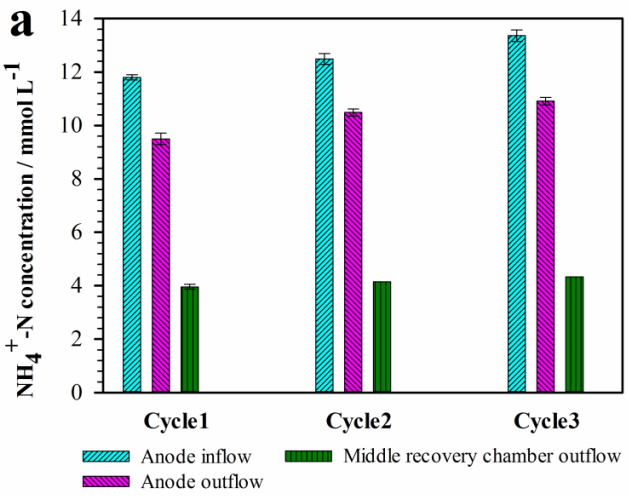
Appendix 5 COD removal efficiency and coulombic efficiency of the anode in the three-chamber MFCs

		inflow COD*/(mg·L^{-1})	outflow COD*/(mg·L^{-1})	removal efficiency/%	electron collected/C	coulombic efficiency/%
MFC1	Cycle1	819.2	155.9	80.97	196.6	24.57
	Cycle2	815.2	162.3	80.10	183.3	23.29
	Cycle3	807.2	124.1	84.63	170.7	20.72
MFC2	Cycle1	719.7	81.1	88.73	184.7	23.98
	Cycle2	743.6	127.3	82.89	179.5	24.16
	Cycle3	771.4	65.2	91.54	167.1	19.62
MFC3	Cycle1	787.3	112.9	85.65	153.5	18.87
	Cycle2	847.0	117.7	86.10	172.1	19.57
	Cycle3	882.8	175.0	80.18	181.7	21.29

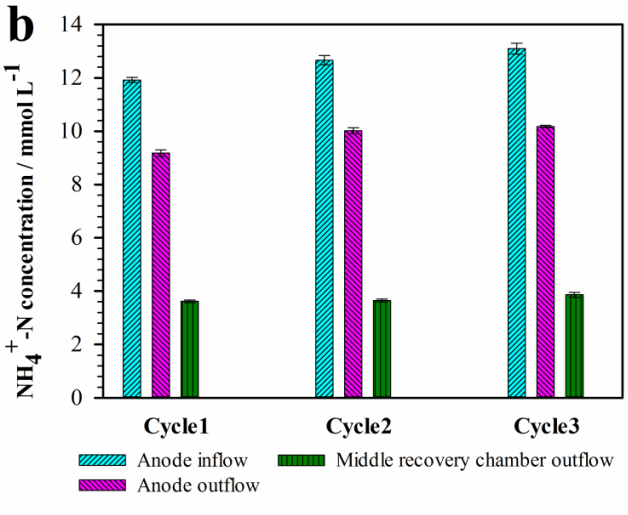
Note：* Average value of three repeats



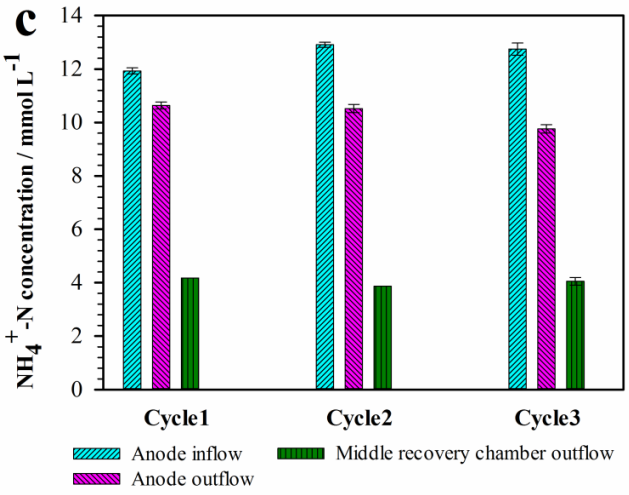
Appendix 6 Distribution of NH_4^+-N from the anode inflow within three control test cycles (open circuit)



(a)

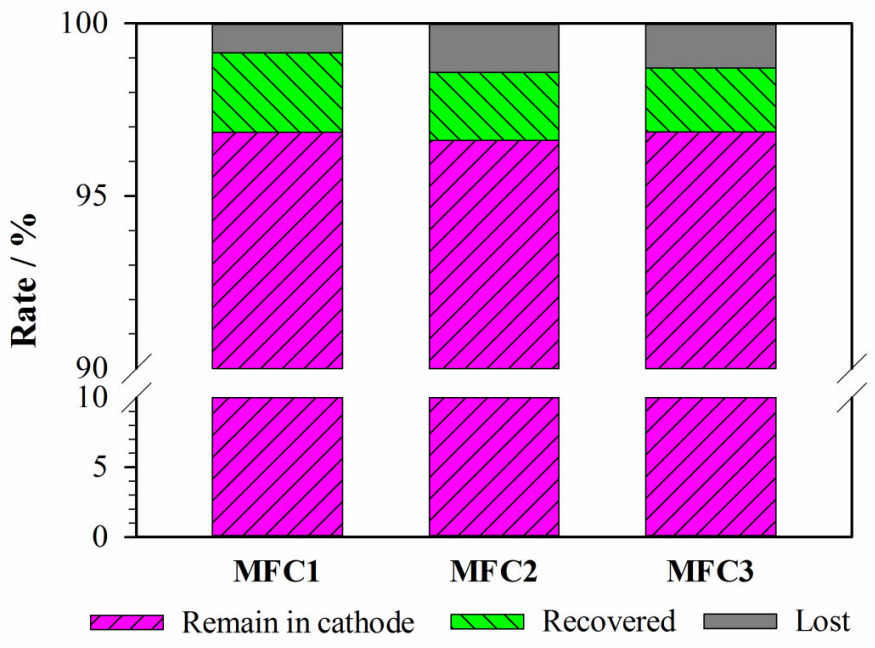


(b)

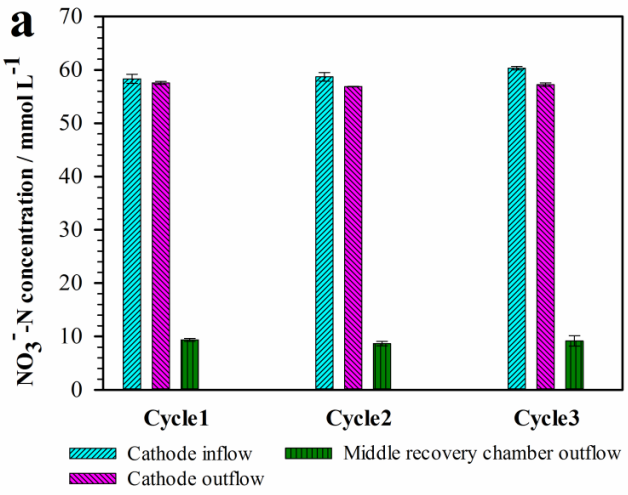


(c)

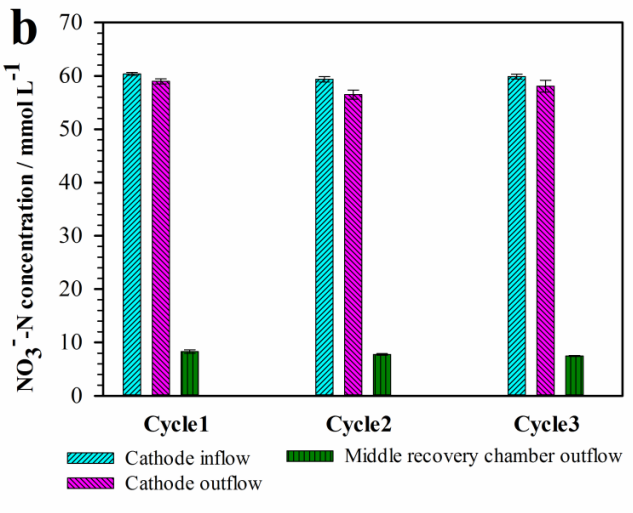
Appendix 7 NH_4^+-N concentration in the anode inflow, the anode outflow and the middle recovery chamber outflow in MFC1 (a), MFC2 (b) and MFC3 (c) in the control tests, respectively. The error bar is for *n*=3 repeated tests



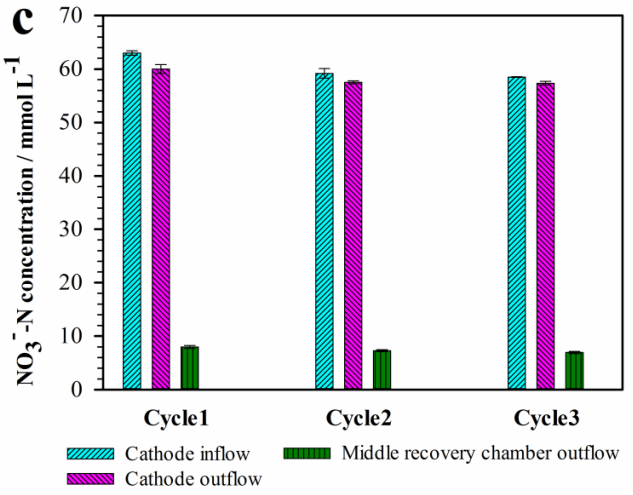
Appendix 8 Distribution of NO_3^--N from the cathode inflow within three control test cycles (open circuit)



(a)



(b)



(c)

Appendix 9 NO_3^--N concentration in the cathode inflow, the cathode outflow and the middle recovery chamber outflow in MFC1 (a), MFC2 (b) and MFC3 (c) in the control tests, respectively. The error bar is for *n*=3 repeated tests