

Supplementary Materials:

Nitrogen removal ability and characteristics of the laboratory-scale tidal flow constructed wetlands for treating ammonium-nitrogen contaminated groundwater

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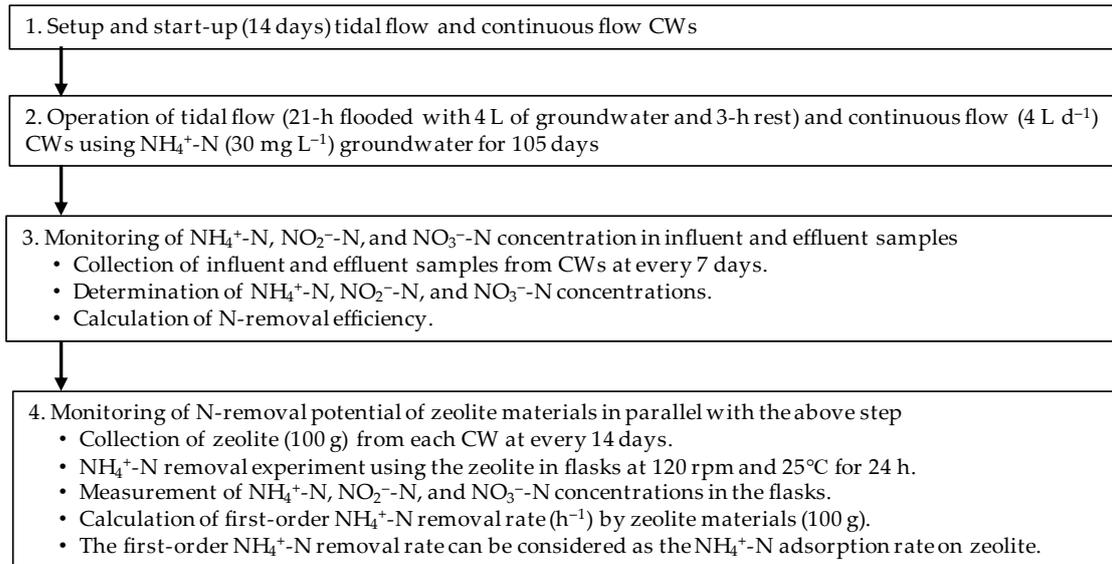
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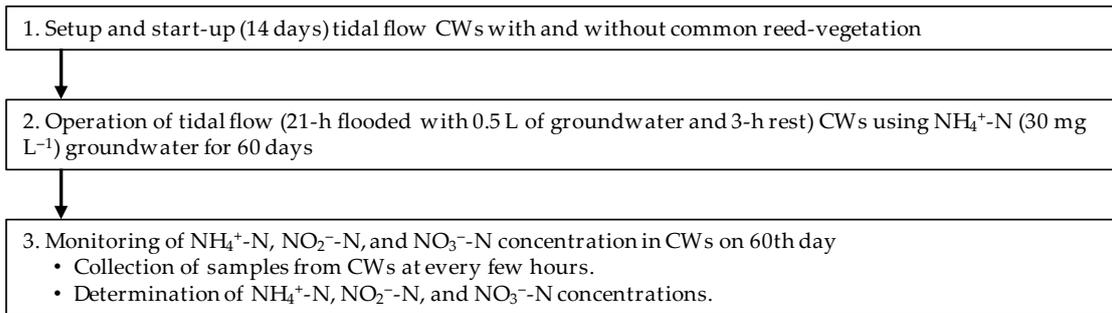
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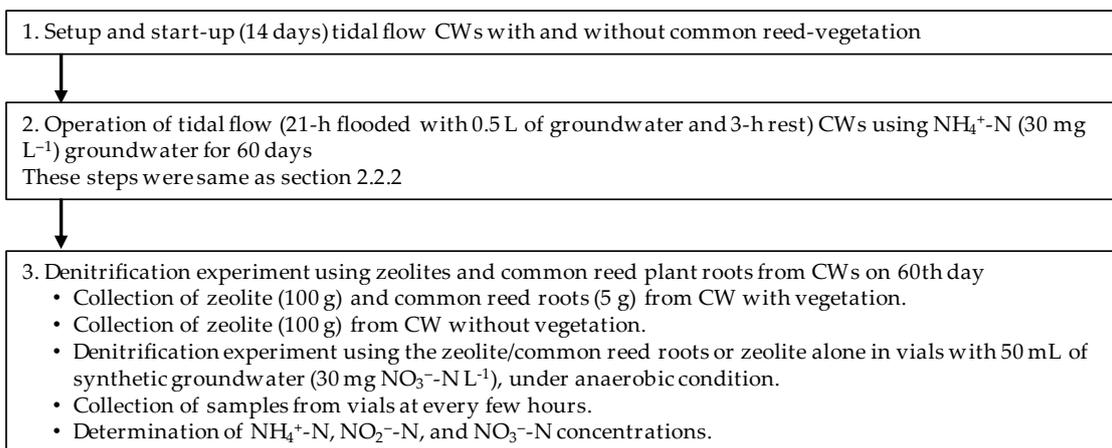
(a)



(b)



(c)



(d)

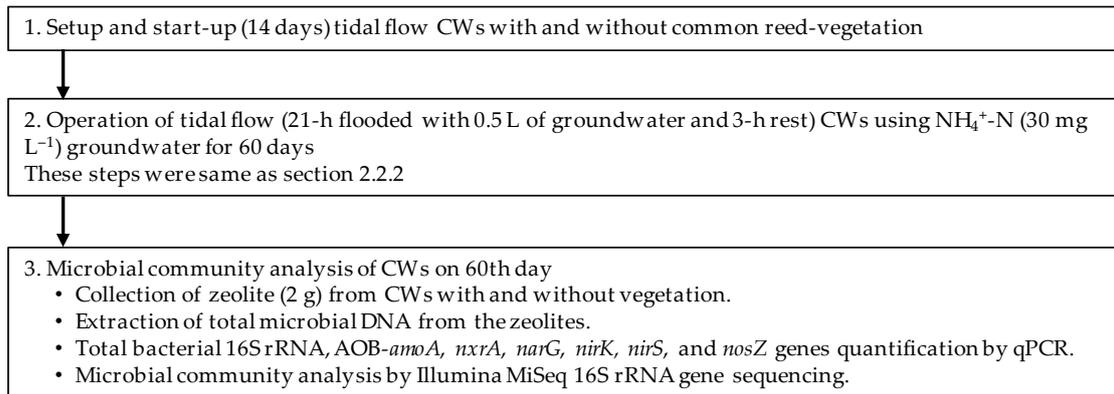


Figure S1. The experimental flowcharts of section 2.2.1 (a), 2.2.2 (b), 2.2.3 (c), and 2.4 (d).

Table S1. Target genes for qPCR analysis, primers and sequences, amplification sizes, and annealing temperatures

Target gene	Primer	Sequences (5'-3')	Amplification size (bp)	Annealing Temp (°C)	Reference
Bacterial 16S rRNA	341F	CCTACGGGAGGCAGC AG	193	60	[34]
	534R	TACCGCGGCTGCTGGC AC			
<i>amoA</i>	amo598f	GAATATGTTGCGCCTGA TTG	120	56	[35]
	amo718r	CAAAGTACCACCATA CGCAG			
<i>nxrA</i>	F1norA	CAGACCGACGTGTGC GAAAG	322	58	[36]
	R1norA	TCYACAAGGAACGGA AGGTC			
<i>narG</i>	1960m2f	TA(CT)GT(GC)GGGCAG GA(AG)AAACTG	100	58	[37]
	2050m2r	CGTAGAAGAAGCTGG TGCTGTT			
<i>nirK</i>	nirK583F	TCATGGTGCTGCCGCG KGACGG	326	63	[38]
	nirK909R	GAACCTGCCGGTKGCC CAGAC			
<i>nirS</i>	nirScd3af	GT(C/G)AACGT(C/G)AA GGA(A/G)AC(C/G)GG	425	57	[39]
	nirSR3cd	GA(C/G)TTCGG(A/G)TG (C/G)GTCTTGA			
<i>nosZ</i>	nosZ1527F	CGCTGTTCHTCGACAG YCA	250	58	[40]
	nosZ1773R	ATRTC GATCARCTGBT CGTT			

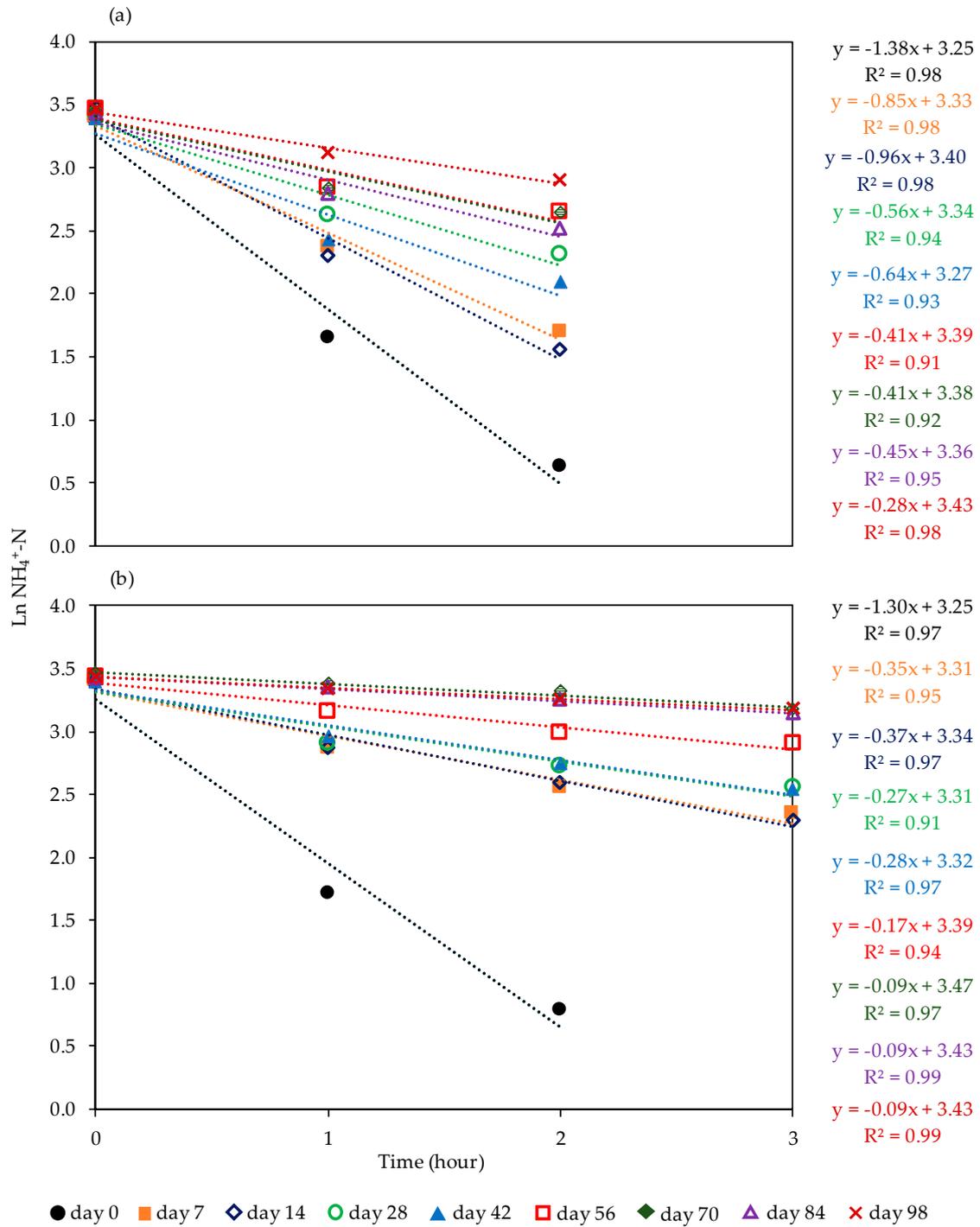


Figure S2. First-order kinetic models for the decrease in NH₄⁺-N concentrations during the first 2-3 hours of N-removal potential experiment in zeolite-microbe association of (a) tidal flow CWs and (b) continuous flow CWs.