

1 **Title:** Ammonium removal pathway driven by the Fe(II)/Fe(III) cycle through  
2 intermittent aeration

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13 3 pages (page S1-page S3), 2 figures (Figure S1-Figure S2) and 1 table (Table S1) are  
14 contained in the **Supporting Information**.

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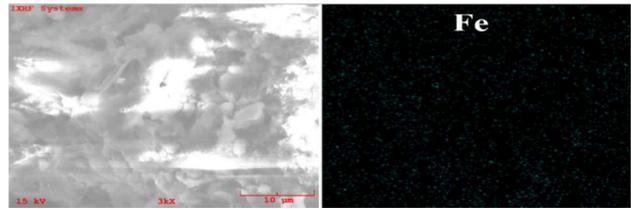
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Elt.	Line	Intensity (c/s)	Conc	Units	Error 2-sig	MDL 3-sig	
C	Ka	135.60	21.412	wt.%	2.230	.000	
N	Ka	17.23	6.391	wt.%	8.403	.000	
O	Ka	26.26	5.280	wt.%	5.368	.000	
Si	Ka	9.21	.479	wt.%	8.356	.000	
P	Ka	10.01	.502	wt.%	8.621	.000	
S	Ka	.00	.000	wt.%	-1.#10	.000	
Ca	Ka	5.83	.473	wt.%	10.230	.000	
Cr	Ka	2.96	.351	wt.%	15.682	.000	
Mn	Ka	2.31	.346	wt.%	20.335	.000	
Fe	Ka	29.12	4.866	wt.%	3.021	.000	
Hg	La	4.36	21.586	wt.%	12.316	.000	
Pb	La	3.76	38.314	wt.%	9.985	.000	
			100.000	wt.%			Total

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kV: 15.0

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akeoff Angle: 35.0°

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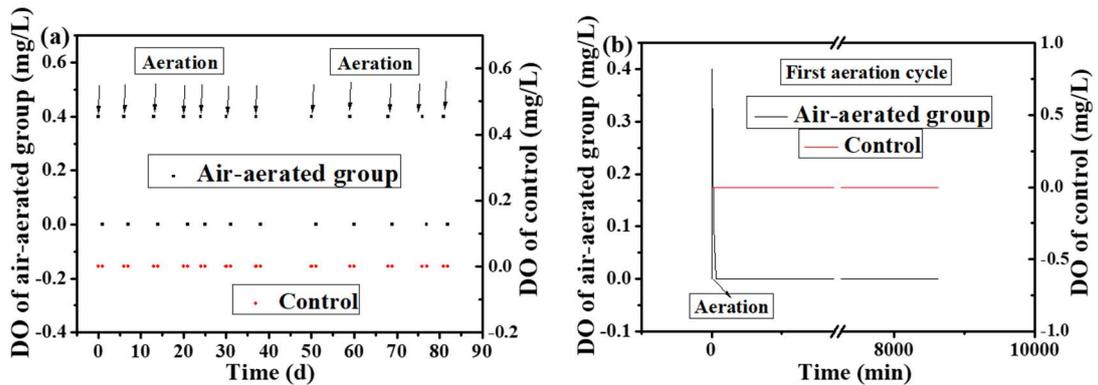
Elapsed Livetime: 10.0

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**Figure S1.** EDS analysis (top) and elemental mapping (bottom) of the original sludge slurry

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**Figure S2.** DO content of all the aeration cycles (a), and specific changes of DO in

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the first aeration cycle (initial 6 days) (b) in the control and air-aerated groups

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36 **Table S1.** Relative abundances of denitrifiers in control and air-aerated groups on day  
 37 50 and 90

	<i>Rhodoplanes</i>	<i>Bacillus</i>	<i>Pseudomonas</i>	<i>Corynebacterium</i>
	(%)	(%)	(%)	(%)
Control (day 50)	0	0	0	0
Air (day 50)	0	0	0	0
Control (day 90)	0	0	0	0
Air (day 90)	0.2	0	0.2	0

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