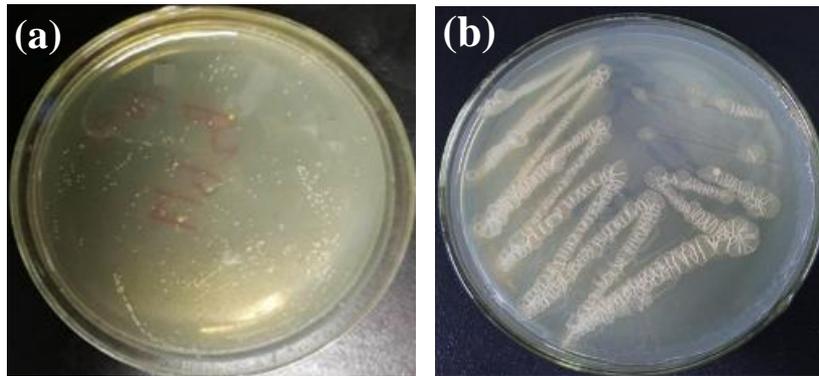
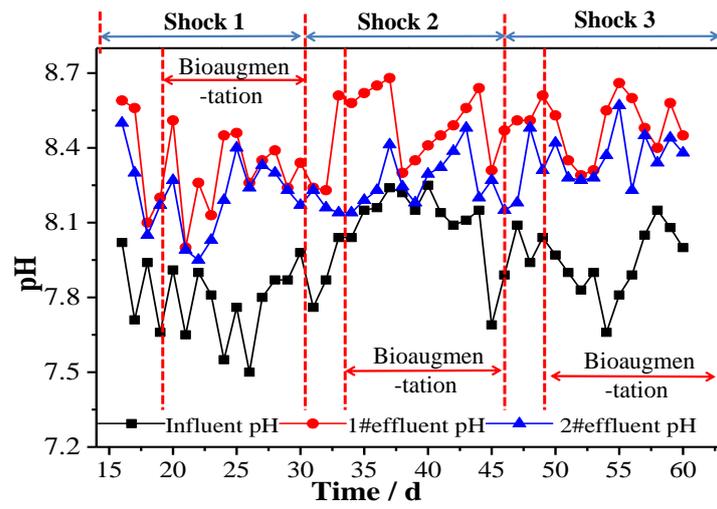


## Supplementary Materials



**Figure S1.** The morphological features of functional bacteria: (a) *Brucella* sp (BN3);

(b) *Bacillus subtilis* (BY2).



**Figure S2.** Changes of pH in the two ASSBRs during the whole experiment running

**Table S1.** The two ASSBRs process operating schedule

Operation method	ASSBR 1# operating time (min)	ASSBR 2# operating time (min)
Influent water	60	60
Aeration	240	240
Sludge sedimentation	60	60
Open valve	60	60
Single reactor run time interval	120	120
Two reactors run time interval	240	—

Note: Two ASSBRs are circularly operated every 8 hours.

**Table S2.** Water samples were collected from different positions in the two ASSBRs

Experiment number	Sampling position	Experimental stage
W3.1	1# ASSBR wastewater	Initial stage
W3.2	1# ASSBR wastewater	
W4.1	2# ASSBR wastewater	
W4.2	2# ASSBR wastewater	
S3.1	1# ASSBR activated sludge	
S3.2	1# ASSBR activated sludge	
S4.1	2# ASSBR activated sludge	
S4.2	2# ASSBR activated sludge	
TW.1	2# ASSBR wastewater	Shock 1
TW.2	2# ASSBR wastewater	
TS.1	2# ASSBR activated sludge	
TS.2	2# ASSBR activated sludge	
TW.3	2# ASSBR wastewater	Shock 2
TW.4	2# ASSBR wastewater	
TS.3	2# ASSBR activated sludge	
TS.4	2# ASSBR activated sludge	
YW.1	2# ASSBR wastewater	Shock 3
YW.2	2# ASSBR wastewater	
YS.1	2# ASSBR activated sludge	
YS.2	2# ASSBR activated sludge	

Note: To ensure the accuracy of the data, take two samples at each position.