

Advanced treatment of biologically pretreated coal gasification wastewater by a novel expansive flow biological intermittent aerated filter process with ceramic filler from reusing coal fly ash

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Supplementary information:

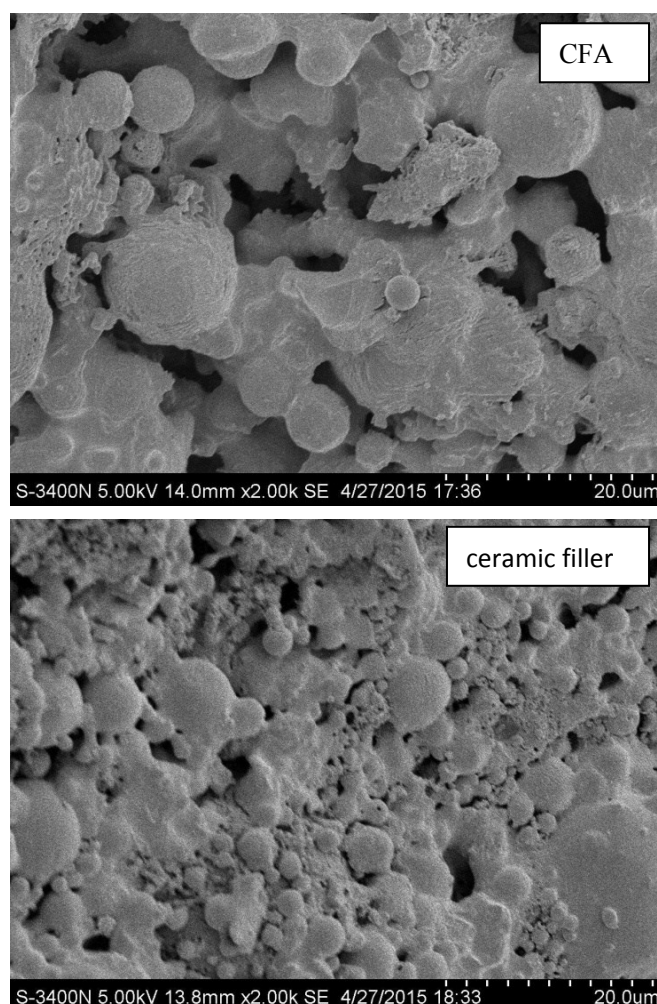


Fig. S1 The appearance and microstructure of CFA and ceramic filler.

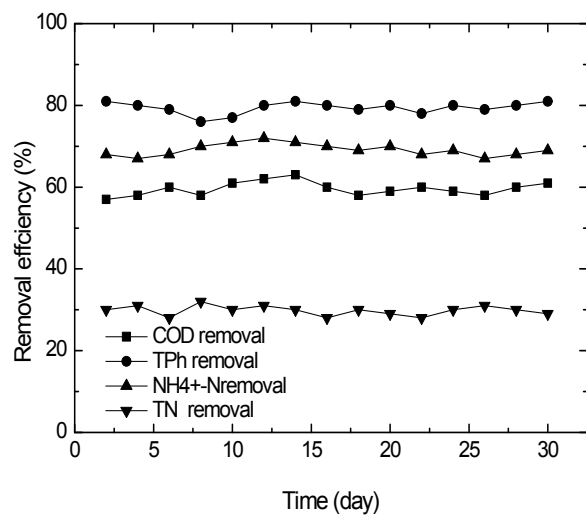


Fig. S2 The performance of pollutants removal in continuous aeration expansive flow BAF.

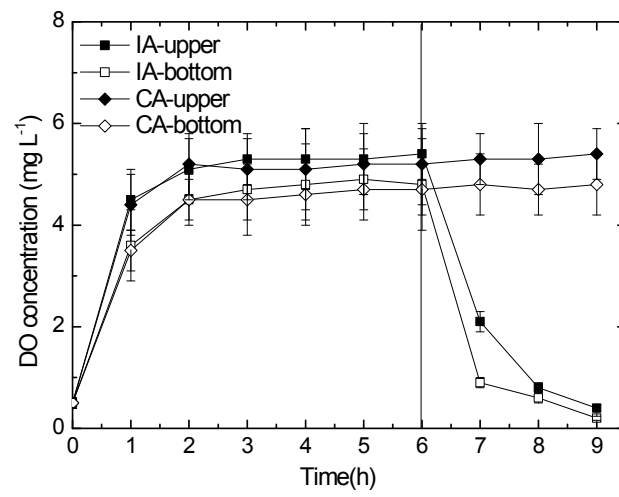


Fig. S3 Variations of DO in intermittent aeration (IA) and continuous aeration (CA) expansive flow BAF at HRT of 9 h.

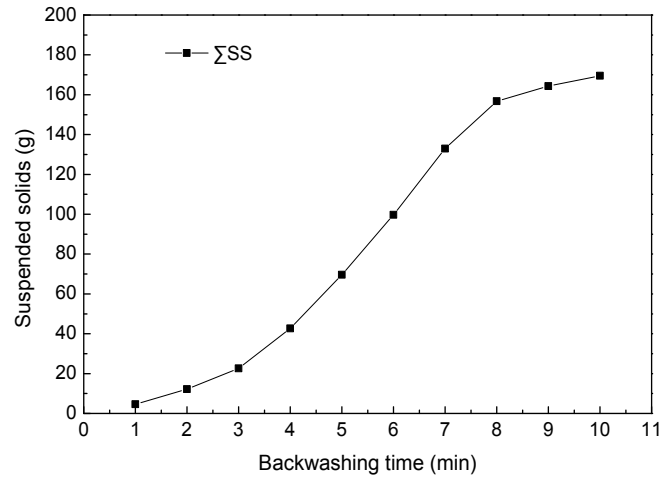


Fig. S4 Relation between backwashing time and accumulative SS in backwashing liquor (days 30-60).

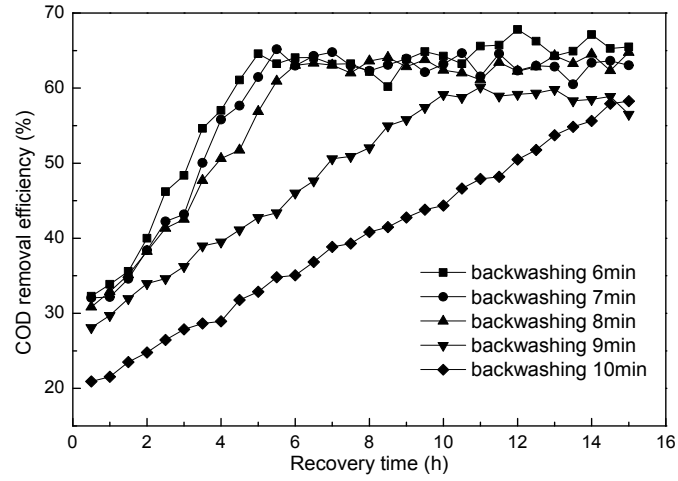


Fig. S5 Relation between COD removal and filter bed recovery time (days 30-60).

Table S1 The leached concentrations of main metals of ceramic filler at different pH (mg L⁻¹).

pH	Si	Fe	Al	Zn	Cu	Cr	As	Pb
2	1.90±0.5	1.52±0.3	1.20±0.4	0.95±0.2	0.35±0.03	0.45±0.05	0.30±0.04	0.25±0.06
6	1.65±0.3	1.16±0.1	1.13±0.2	0.81±0.2	0.33±0.02	0.28±0.04	0.18±0.03	0.19±0.04
10	1.60±0.5	0.96±0.1	1.06±0.2	0.75±0.1	0.27±0.02	0.22±0.04	0.15±0.03	0.16±0.03