

## Supplementary Information

### 1. Apparatus picture



Appratus Picture

Fig. S1 the apparatus picture

The picture contains four main apparatus, including jar tester, peristaltic pump, ozone generator and auto winding machine. The detailed information is in the main article.

### 2. GC chromatograms of phenol and formaldehyde

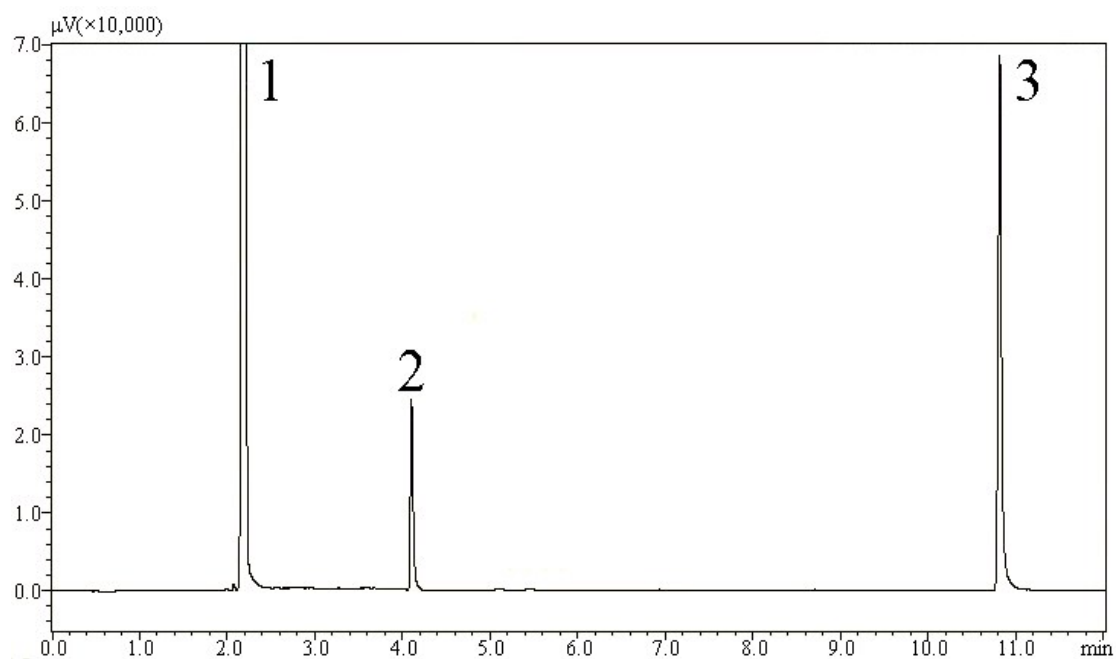


Fig. S2 GC chromatograms of phenol and formaldehyde before treatment

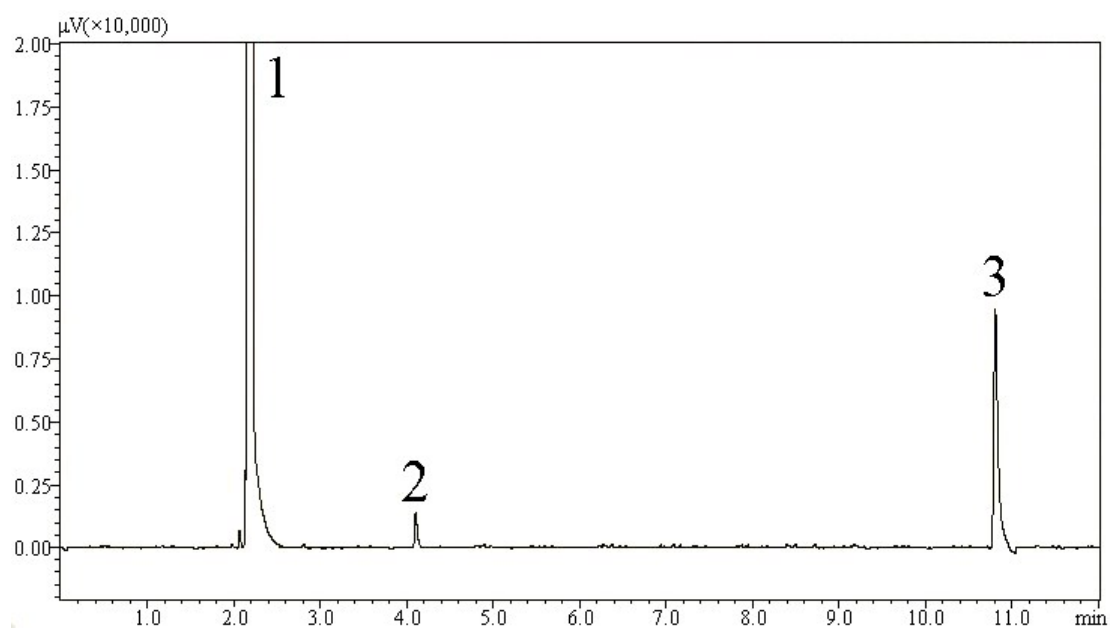


Fig. S3 GC chromatograms of phenol and formaldehyde after treatment

1, 2 and 3 represents chloroform, phenol and FA-DNPH, respectively, whose retention time (RT) is 2.160 min, 4.101min and 10.815 min, respectively. For the raw water, the determination process is the same as the analysis of phenol and formaldehyde in main article. For the effluent, in order to make phenol easier to be detected, it is concentrated 5 times when extracted by chloroform.

