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Supporting Information
(3 pages)

Pre-oxidization-induced Change of Physicochemical Characteristics and Removal Behaviours in Conventional Drinking Water Treatment Processes for Polyethylene Microplastics

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Text 1S. The electron paramagnetic resonance (EPR) spin trapping experiments were performed using a Bruker A200 ESP 300E instrument at 300 K. The EPR spectrometer settings in the spin trapping experiments were: center field, 351.194 mT; sweep width, 10.00 mT; modulation amplitude, 0.1 mT; sweep time, 41 s; microwave frequency, 9.858 GHz; microwave power, 2.25 mW; receiver gain, 1.42×10^4. The sample of ozonation system was draw at the reaction time of 3 min, followed by DMPO addition ($[DMPO]_0$ = 12.5 mg/L) and subsequent filtration. The filtrated sample was absorbed in the capillaries before transferring into the EPR spin trapping apparatus.

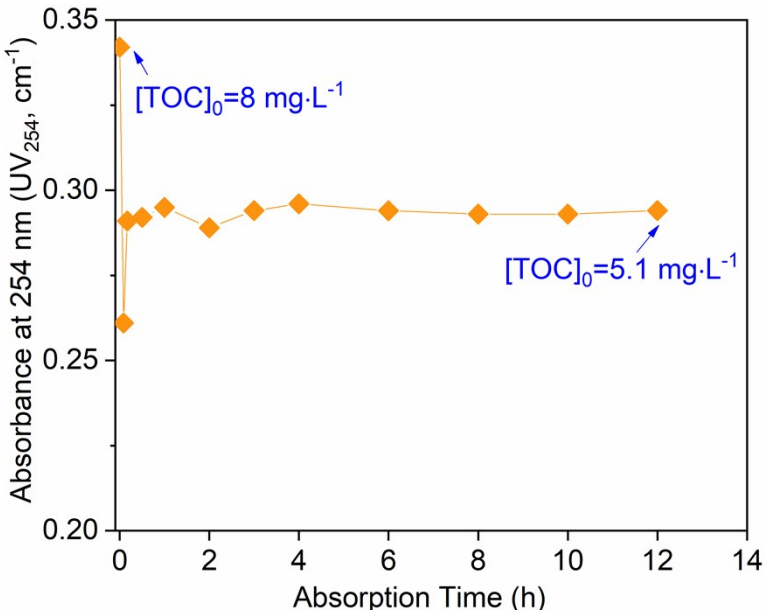

Fig. 1S. Evolution of UV_{254} for mixed solution of HA acid and PE MPs. (Experimental conditions: $[HA]_0$= 8 mg·L^{-1}, PE MPs dose = 32 mg·L^{-1}, 20 NTU turbidity, pH=7.0, ionic strength 10 mM, 25 °C)

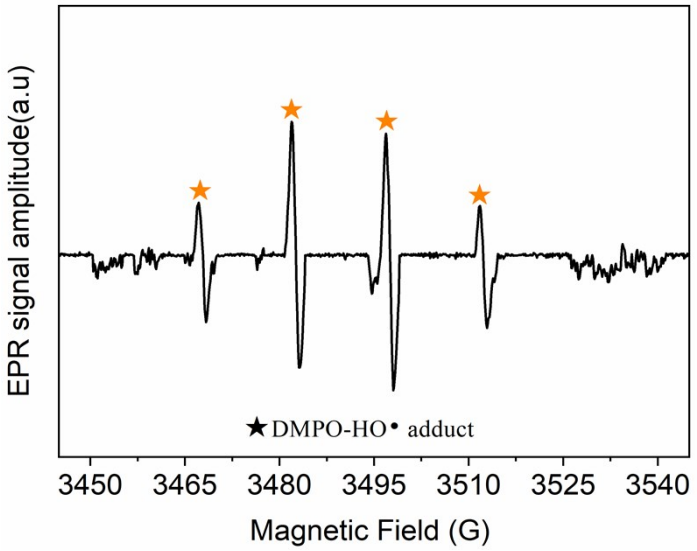

Fig. 2S. The EPR spectra of DMPO-HO• sample collected from pre-ozonation system in the presence of DMPO. (Experimental conditions: $[O_3]_0$= 2.0 mg·L^{-1}, NOM-preloading PE MPs dose = 5 mg·L^{-1}, pH=7.0, ionic strength 10 mM, 25 °C, pH 7.0.)