

1 *Supporting Information*

2
3 **Roles of hydroxyl and carbonate radicals in bisphenol A degradation via**
4 **nanoscale zero-valent iron/percarbonate system: Influencing factors and**
5 **mechanisms**

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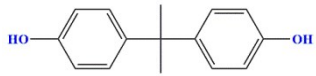
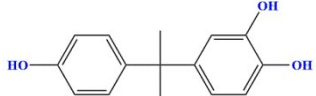
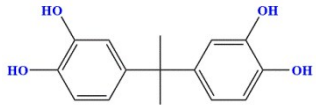
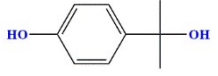
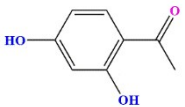
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Synthesis of nZVI catalyst.

The nZVI particle was synthesized by the liquid phase reduction method. Firstly, 100 mL deoxygenated water was added to a three-neck flask (250 mL), followed by adding $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ (0.01 mol) and dissolving with the magnetic stirring. Then, 50 mL NaBH_4 solution (0.03 mol) was gradually dripped into the above solution. The mixture was mechanically stirred for 30 min. The entire reaction process was carried out in N_2 circumstance at room temperature (25 ± 2 °C). After the reaction, the black particles were separated by an external magnet and then washed three times with deoxygenated water and anhydrous ethanol, respectively. After that, the products were dried in vacuum at 50 °C for 12 h. Finally, the dried nZVI particles were sealed and stored in an anaerobic glove box filled with N_2 for the further use.

Table. S1: Identified main transformation products (TPs) of BPA in the nZVI/SPC system.

No.	Compound	Structure	Formula	M.W.	ESI ⁻ (m/z)
1	Bisphenol A (BPA)		C ₁₅ H ₁₆ O ₂	228	227
2	Monohydroxylated BPA (B1)		C ₁₅ H ₁₆ O ₃	244	243
3	Dihydroxylated BPA (B2)		C ₁₅ H ₁₆ O ₄	260	259
4	P-isopropylphenol (B3)		C ₉ H ₁₂ O ₂	152	151
5	1-(2,4-dihydroxyphenyl)ethan-1-one (B4)		C ₈ H ₈ O ₃	152	151

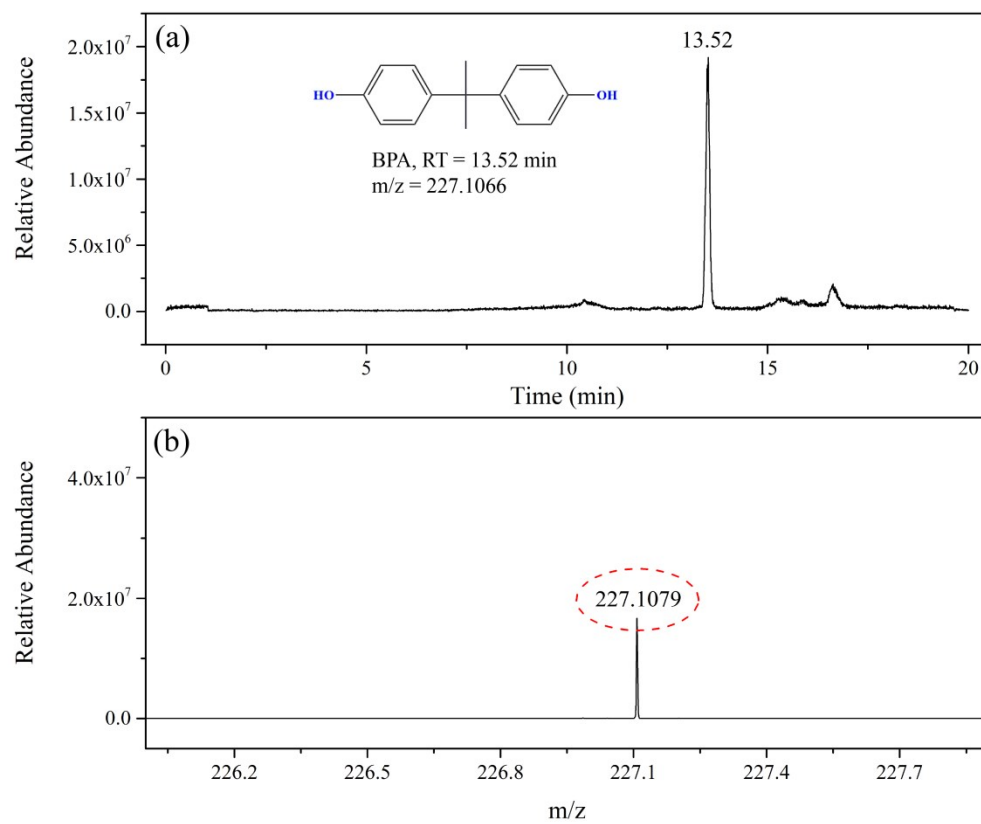


Fig. S1: (a) LC spectra and (b) mass spectra of BPA in the nZVI/SPC system.

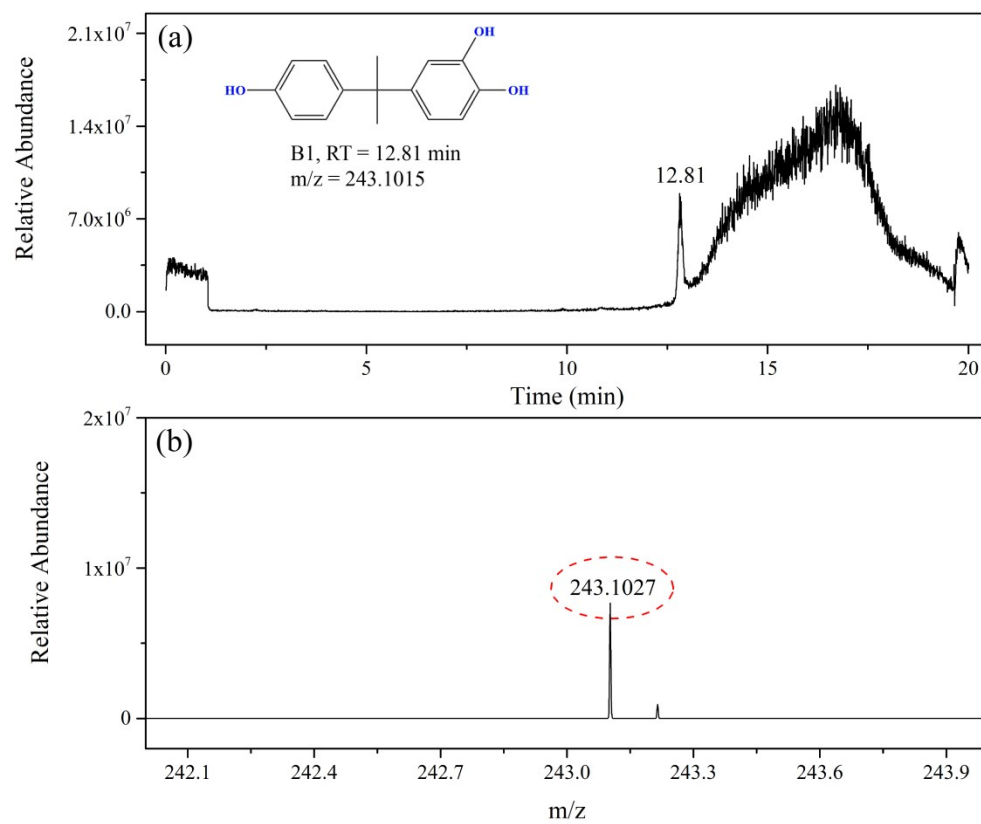


Fig.S2: (a) LC spectra and (b) mass spectra of TPs (B1) in the nZVI/SPC system.

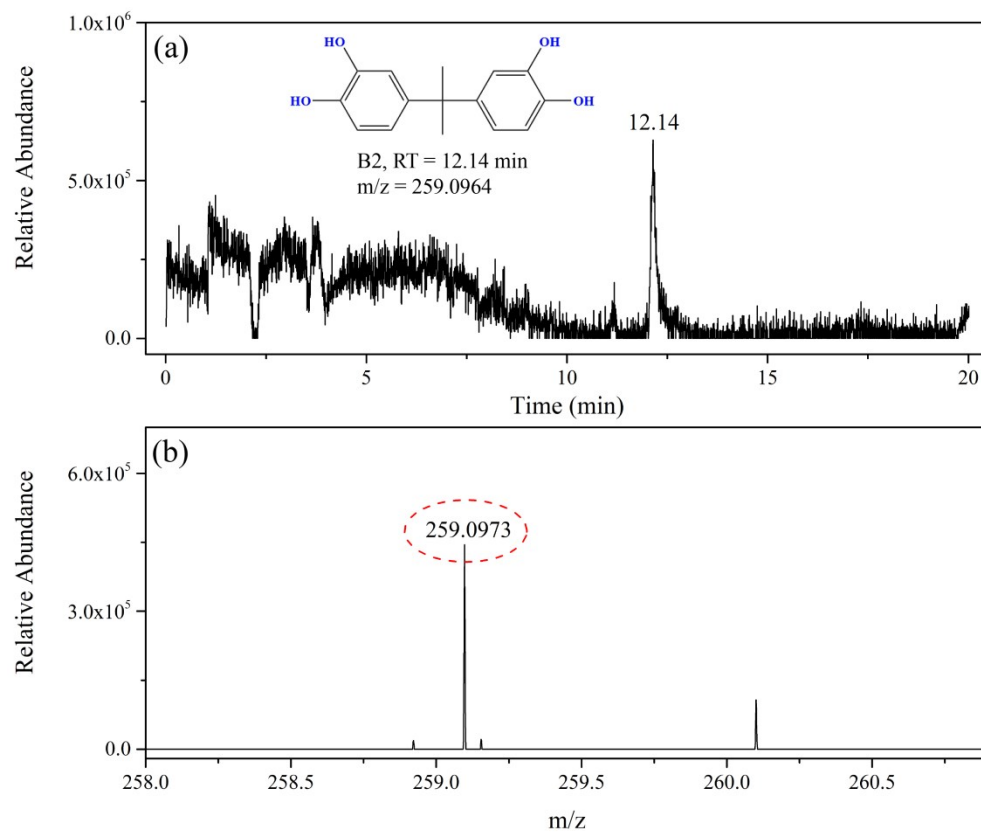


Fig.S3: (a) LC spectra and (b) mass spectra of TPs (B2) in the nZVI/SPC system.

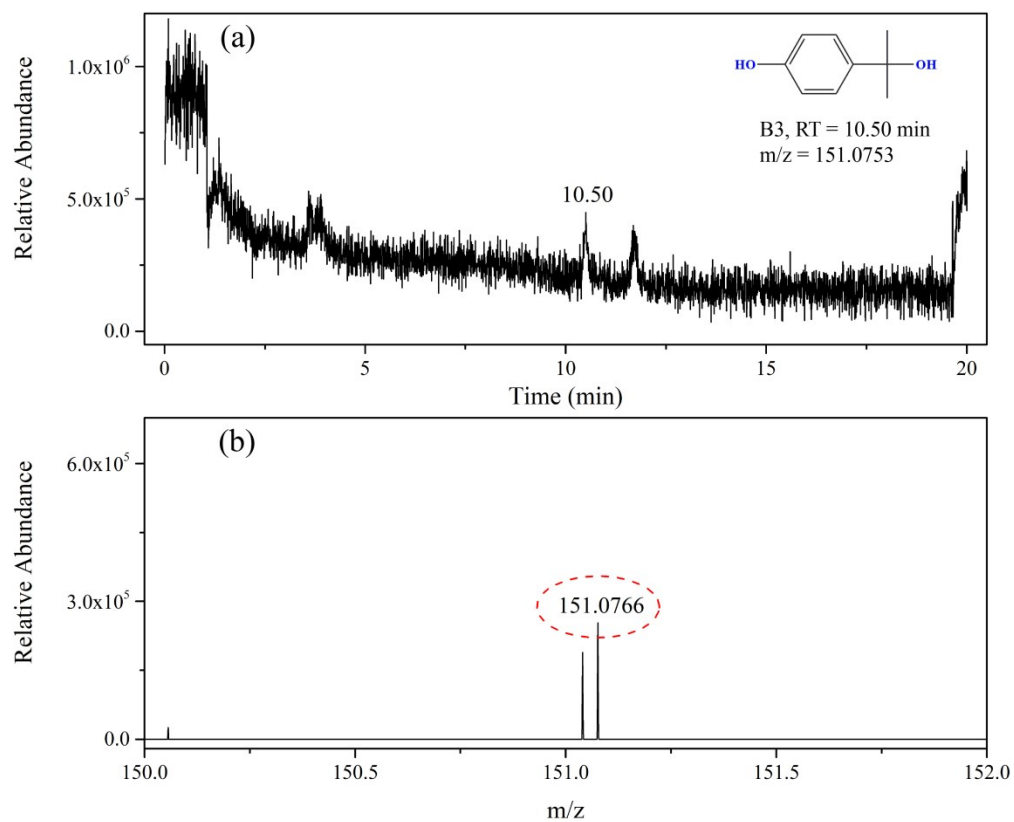


Fig.S4: (a) LC spectra and (b) mass spectra of TPs (B3) in the nZVI/SPC system.

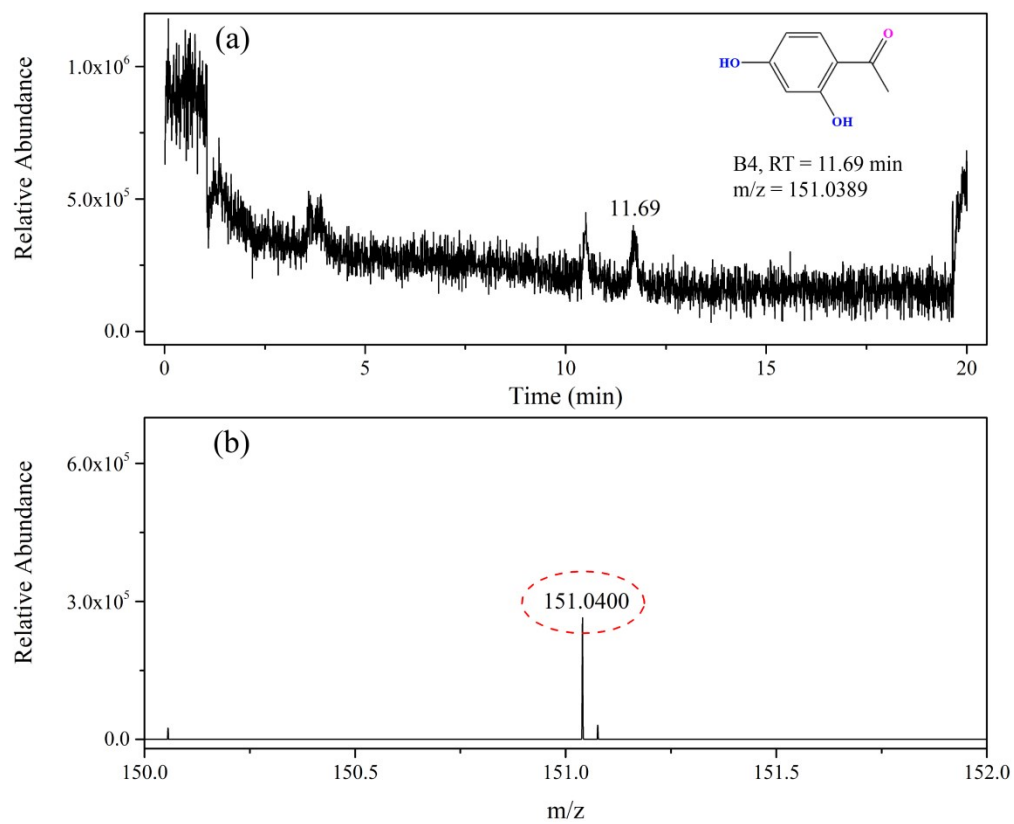


Fig.S5: (a) LC spectra and (b) mass spectra of TPs (B4) in the nZVI/SPC system.