

Supplementary Information for

**Novel MnO₂/reduced graphene oxide micromotors for
high-efficient removal of tetrabromobisphenol A in aqueous**

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Video S1. Micromotor in 3.0% H₂O₂ moving trajectory.

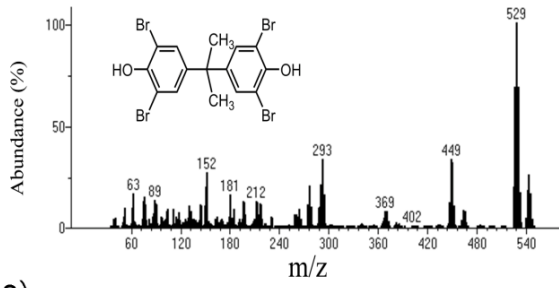
Video S2. Micromotor in 6.0% H₂O₂ moving trajectory.

Video S3. Micromotor in 9.0% H₂O₂ moving trajectory.

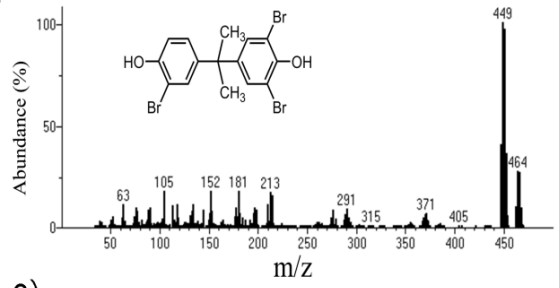
Text S1. Experimental methods for identification of intermediate products of TBBPA

In order to determine the degradation products of TBBPA, the experiment was divided into 8 groups. 12 MnO₂/rGO micromotors (length 4 mm) were immersed in 10 mL TBBPA solution (100mg/mL) with 10 mL H₂O₂ concentrations of 9.0% at pH=3.0 in each group. In each experimental group, the micromotors were placed in the solution for 0 min, 1 min, 5 min, 10 min, 30 min, 60 min, 90 min and 120 min respectively. Then the micromotors were taken out and the reaction solution was transferred to a 50 mL centrifuge tube. 8 mL dichloromethane was added into the centrifuge tube and then the mixed solution was ultrasonic extracted for 10min. The extraction was transferred to the separation funnel and stood for 1 min. The extract of lower layer was collected. The extract and collect process was repeated for three times. Finally, the extract was concentrated by nitrogen purging and quantified to 1 mL to be analyzed by GC/MS.

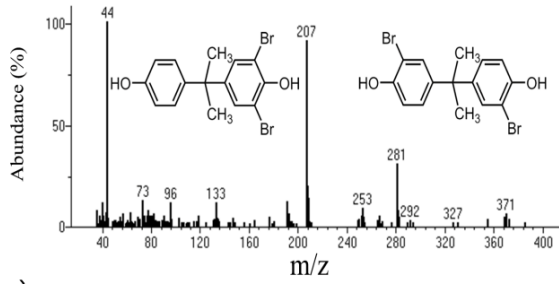
(p0)



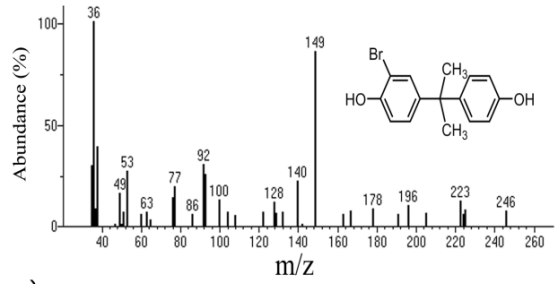
(p1)



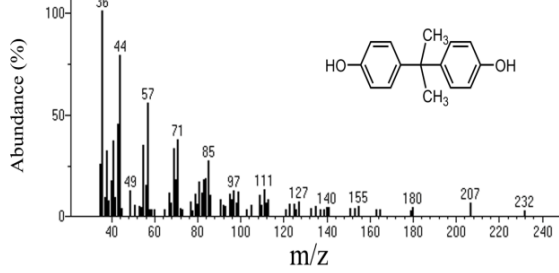
(p2)



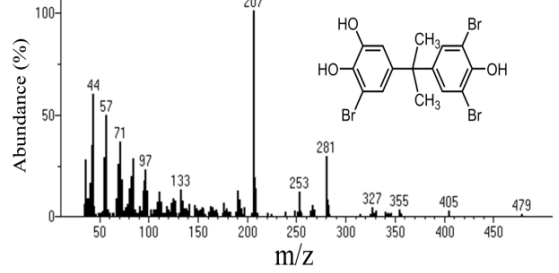
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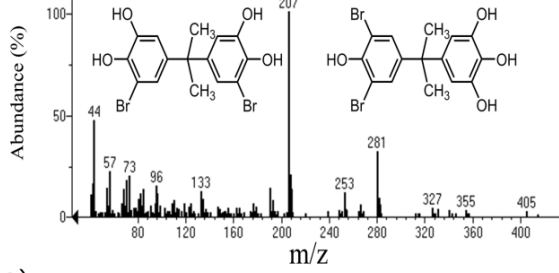
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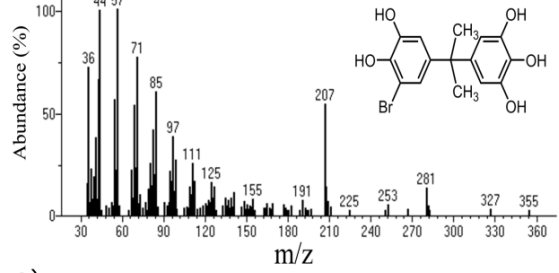
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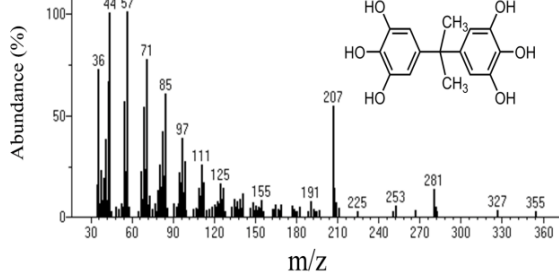
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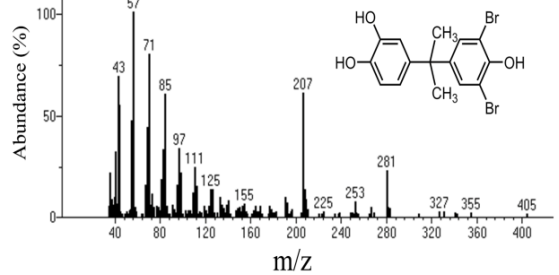
(p7)



(p8)



(p9)



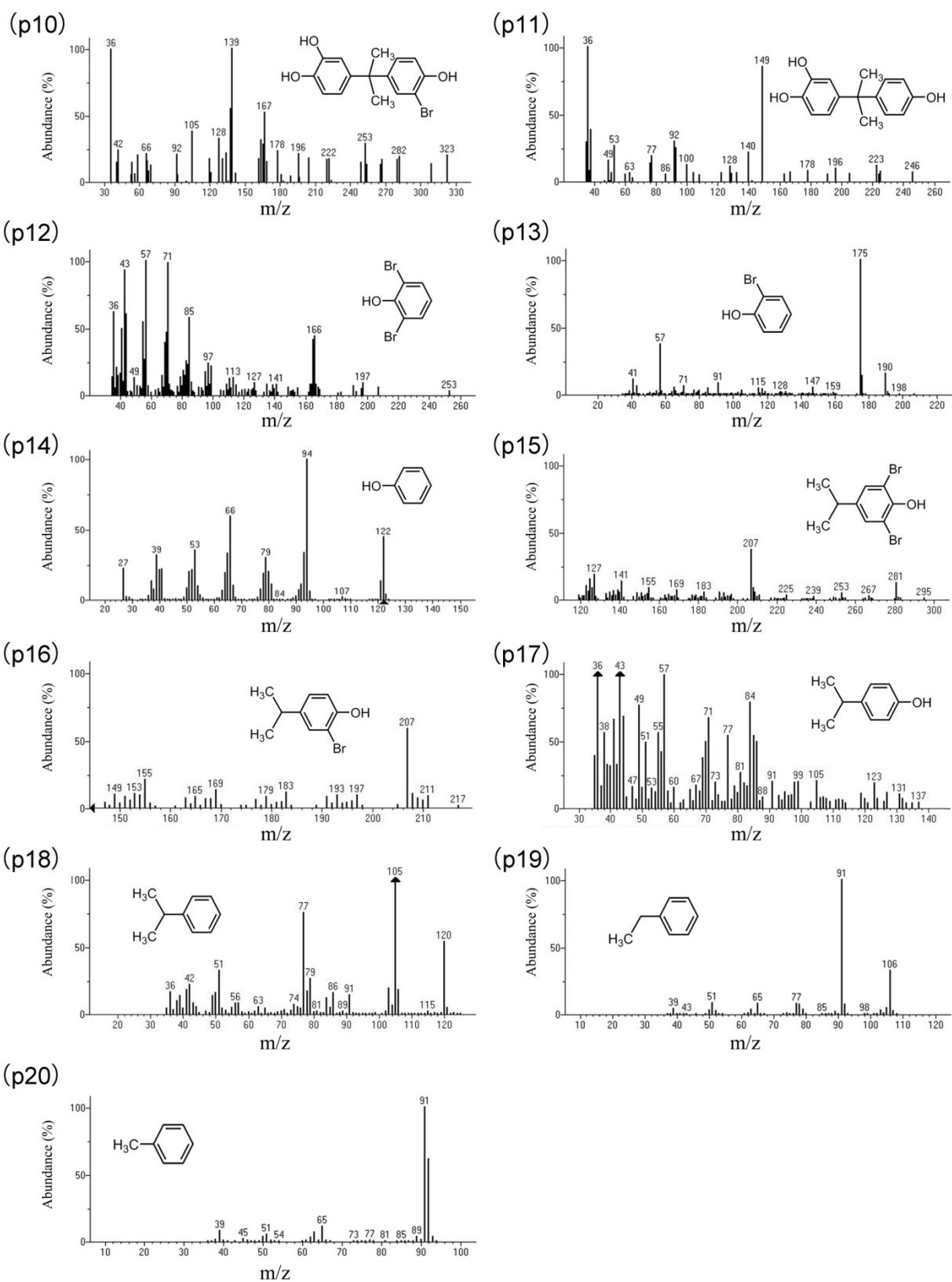


Figure S1. Mass spectrum of potential intermediates from the degradation of TBBPA by MnO₂/rGO micromotors.