

## **Supporting Information**

**Fig. S1** The scan of N-O in the addition of •OH to the N-position of (a) CAe and (b) CAk.



**Fig. S2** Energy diagrams for ·OH addition to (a) CAe, (b) CAk, and (c) BT in water solution.



**Fig. S3** Optimized structures for the cationic radicals of CAe, CAk and BT in the gas phase and water solution (in parentheses) obtained at the B3LYP/6-311++G(d,p) level of theory. Atom representation: blue for N, gray for C, red for O, and white for H.