The Electronic Supporting Information (ESI)

for

Efficient elimination of caffeine from water using Oxone activated by a magnetic and recyclable cobalt/carbon nanocomposite derived from ZIF-67

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Fig. S1. TEM images of a. ZIF-67 and b. CCN. The scale bar is 500 nm.
Fig. S2. N 1s core-level XPS spectrum of CCN.

Fig. S3. Thermogravimetric analyses of ZIF-67 and CCN in air or N₂.
Fig. S4. a. N$_2$ sorption and desorption isotherms and b. the pore size distribution of the precursor of CCN, ZIF-67.

Fig. S5. a. N$_2$ sorption and desorption isotherms and b. the pore size distribution of CCN.
Fig. S6. Elimination of caffeine using CCN-activated Oxone: a. UV-Vis spectral variation; b. total organic carbon (TOC) change during the degradation.
Fig. S7. Illustrations showing a. the activation of PMS by CCN to generate PMS and sulfate radicals; b. the formation of sulfate radicals derived from the self-reaction of PMS radicals.
Fig. S8. A plot for determining the activation energy $E_a$ and the temperature-independent factor $k$.
Fig. S9. GC-MS spectrograms of identified intermediates during the caffeine degradation: a. P1, b. P2, c. P3, d. P4 and e. P5-1 and P5-2.