

## Supporting Information

### Catalytic activity characterization

The geometry of the ozone promoted CB oxidation reactor was showed in Fig. S1.

In the testing process, 80, 120, 160, 200 and 240 °C as setpoint temperature was controlled by a thermocouple. 0, 513, 1108, 1596 and 2300 ppm ozone controlled by the ozone generator was introduced into the reactor under each reaction temperature. Before measuring at each test point, the reaction system had run 30 min in order to make sure that the catalytic reaction had been steady.

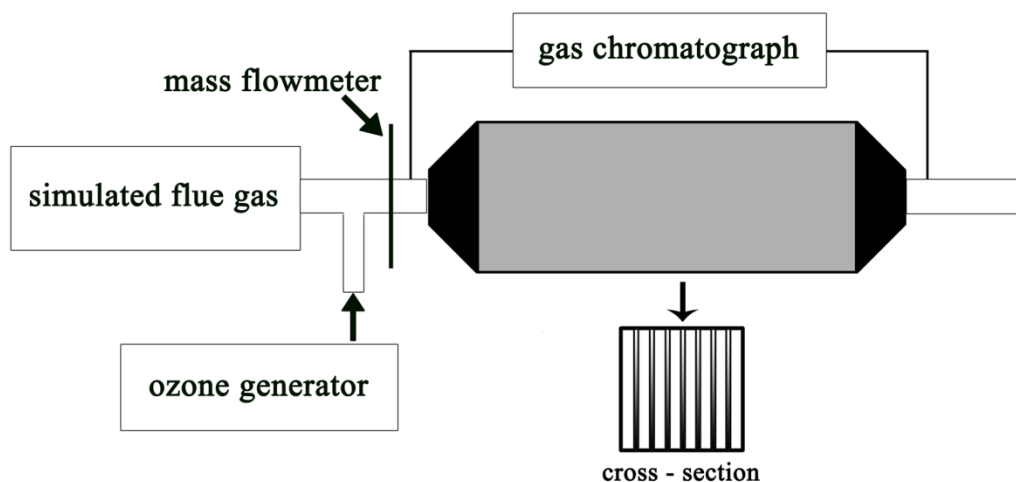


Fig. S1 geometry of the ozone promoted CB oxidation reactor

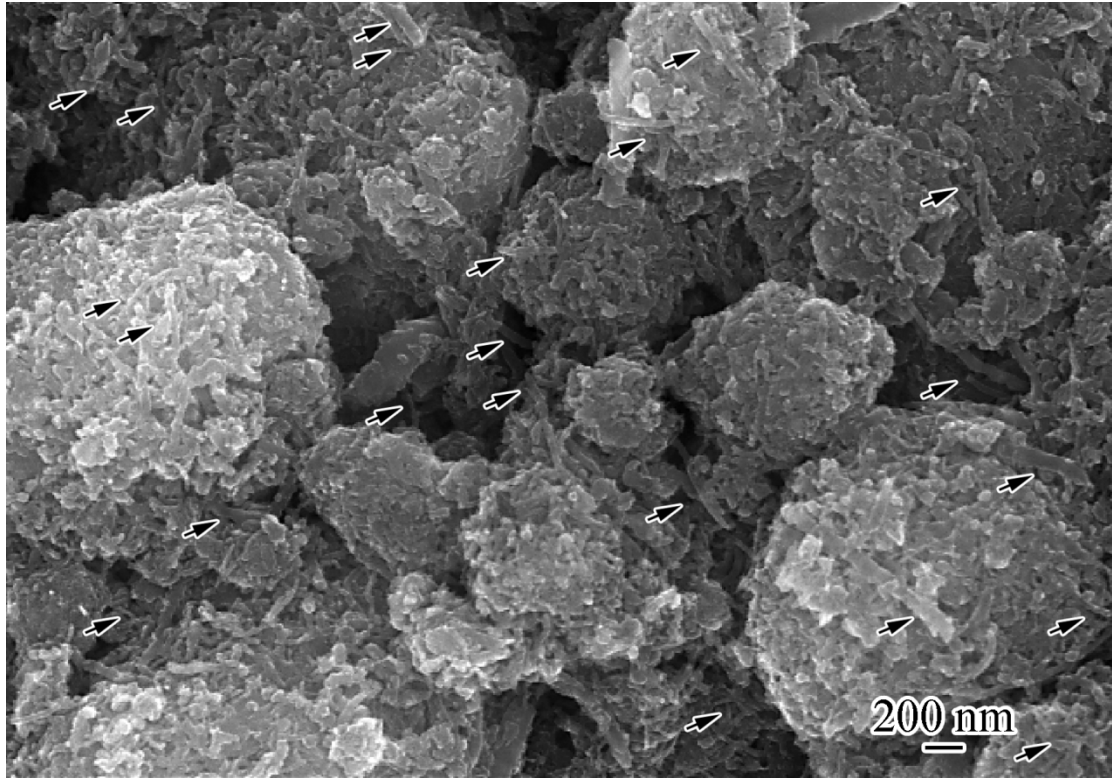


Fig. S2 Low magnification SEM image of a typical catalyst after 240 h reaction with 2300 ppm ozone, showing that CNTs are still existed even on the catalyst surface.