

Supporting Information Figure legends

Fig.S1. Chemical structure (a) and electronic spectra of 1 mg L⁻¹ AO7 in an aqueous solution at pH 7 (b).

Fig. S2. XPS spectra of individual lines of O1s of NST (a), OMT (b), NST/CFs (c) and OMT/CFs (d) measured at high resolution , respectively.

Figure S1

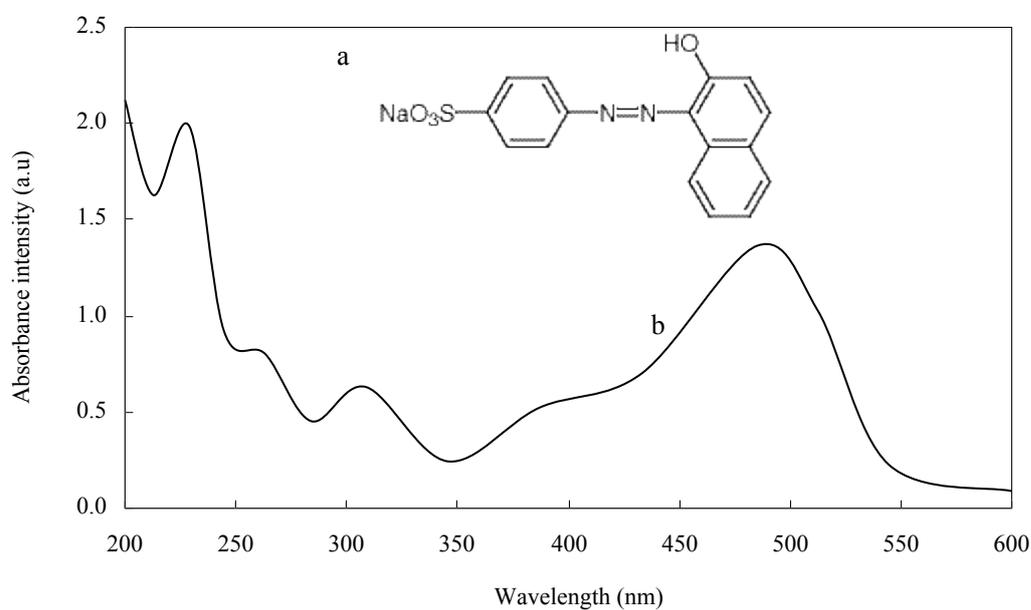
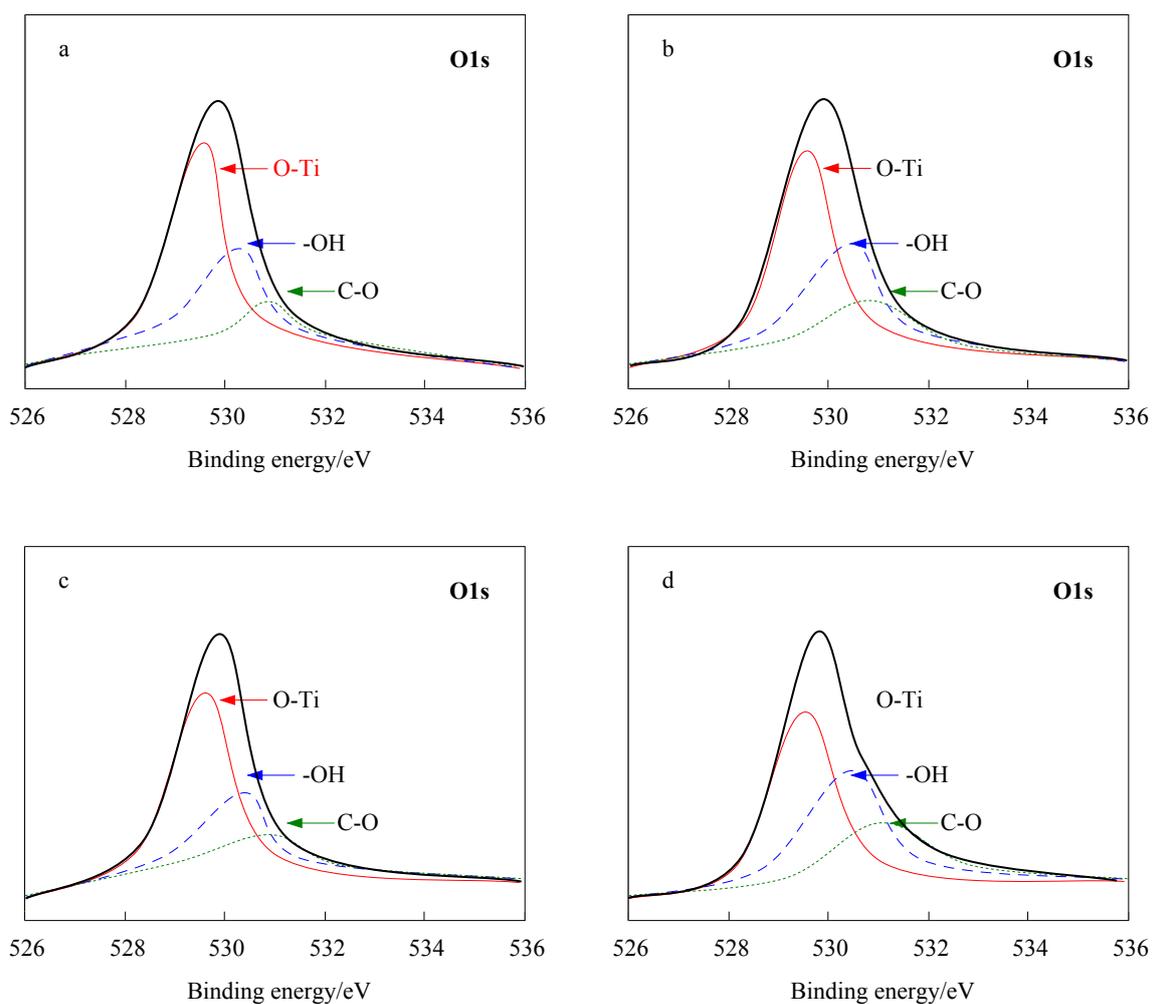


Fig.S2



The O1s spectrum shown in Fig.S2 implies chemical states of oxygen corresponding to the Ti–O bond of TiO₂ (529.6 eV), C–O bond of CFs (531.4 eV), and hydroxyl groups (530.5 eV), which can be compared to published data. The hydroxyl groups on the TiO₂ surface may be attributed to a reaction of adsorbed H₂O with TiO₂ to form Ti–OH, such as $\text{H}_2\text{O} + \text{Ti–O–Ti} \rightarrow 2\text{Ti–OH}$. The surface hydroxyl groups, which act as electron donors for photogenerated H⁺, can be oxidized to hydroxyl radicals ($\bullet\text{OH}$), which can attack almost all organic pollutants. According to XPS spectra as shown in Fig.S2, OMPT/CFs have high hydroxyl content in comparison with others samples.