Supporting Information

for

Surface vs. core N/S/Se-heteroatom doping of carbon nanodots produces divergent yet consistent optical responses to reactive oxygen species

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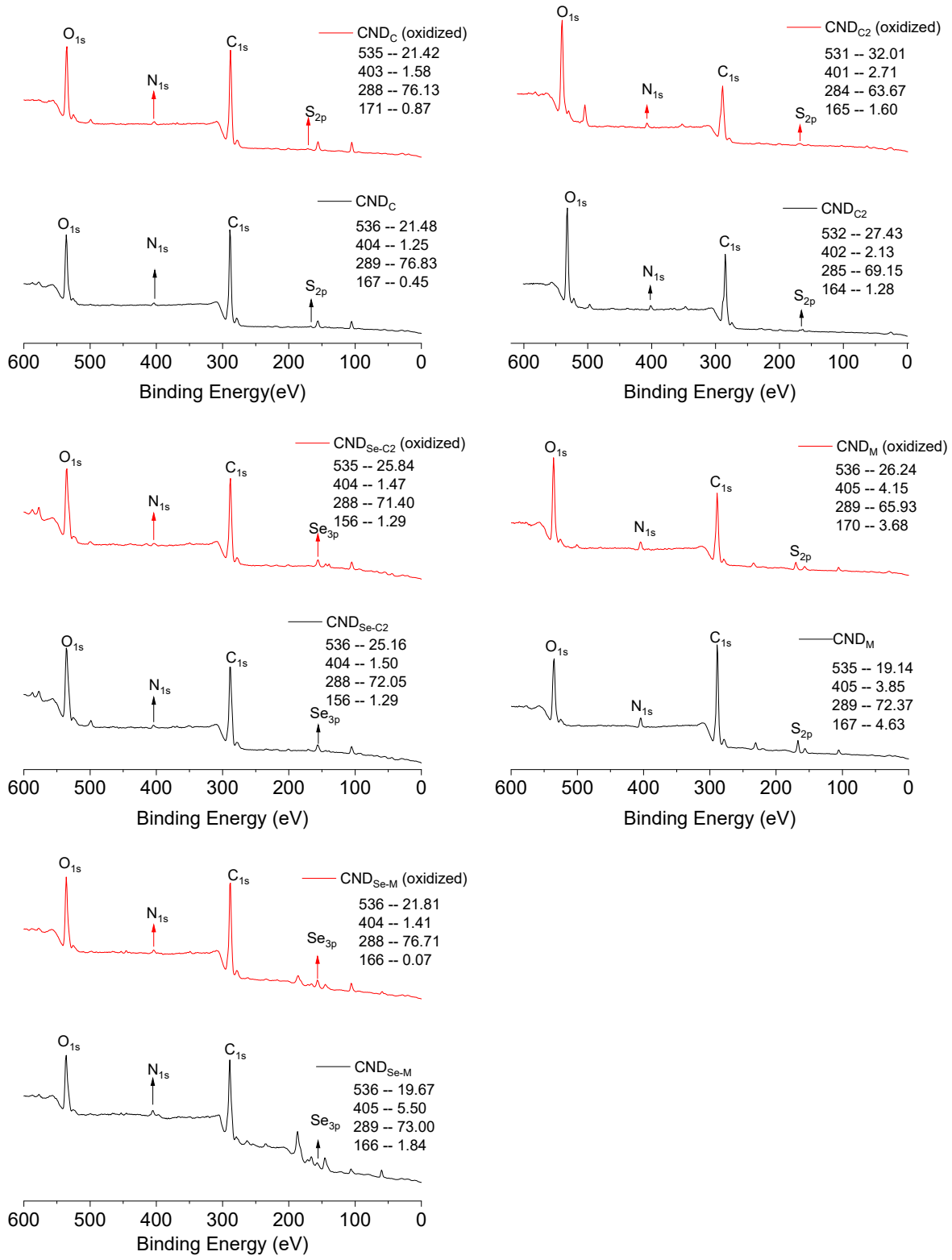

Figure S1| Full Survey XPS spectra of as-prepared and oxidized CNDs.

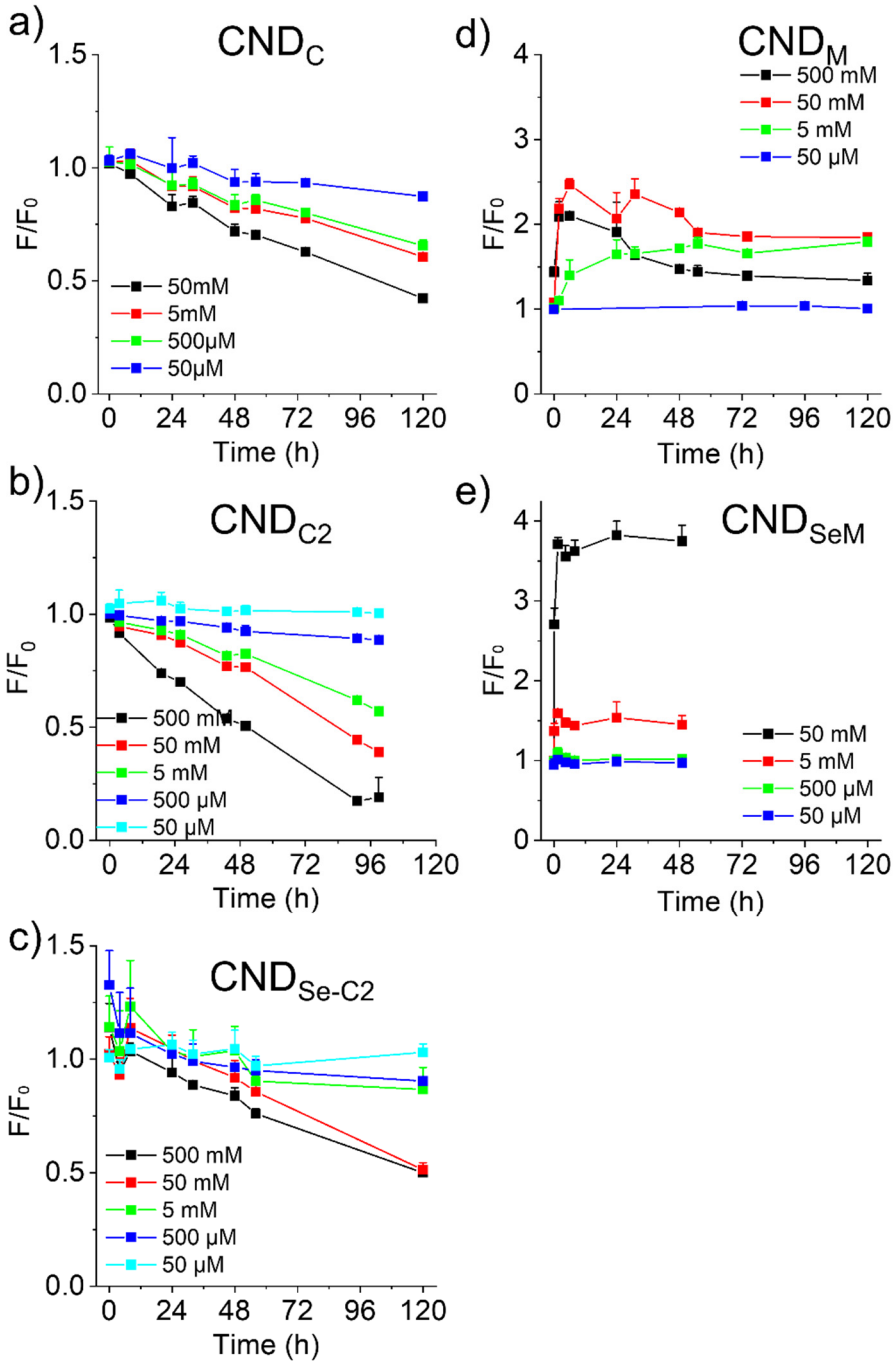

Figure S2| Evolution of fluorescence emission of CNDs with time in the presence of different concentrations of H_2O_2. Data presented as Mean + SD, n = 3.

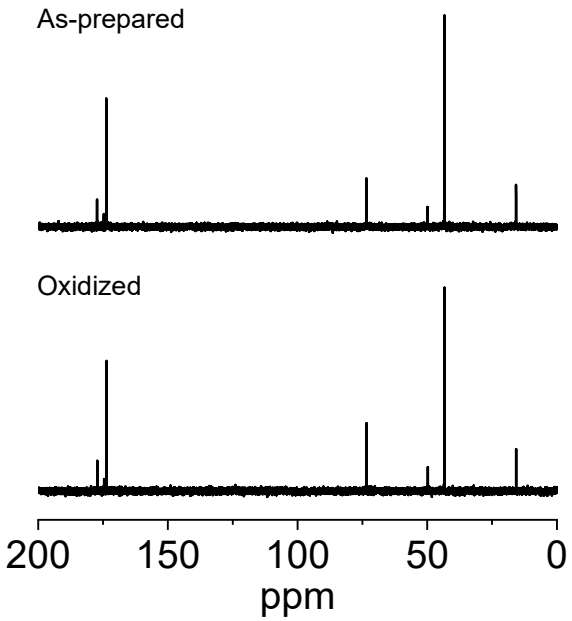

Figure S3| ^{13}C NMR spectra of CND_C before and after oxidation with H_2O_2.

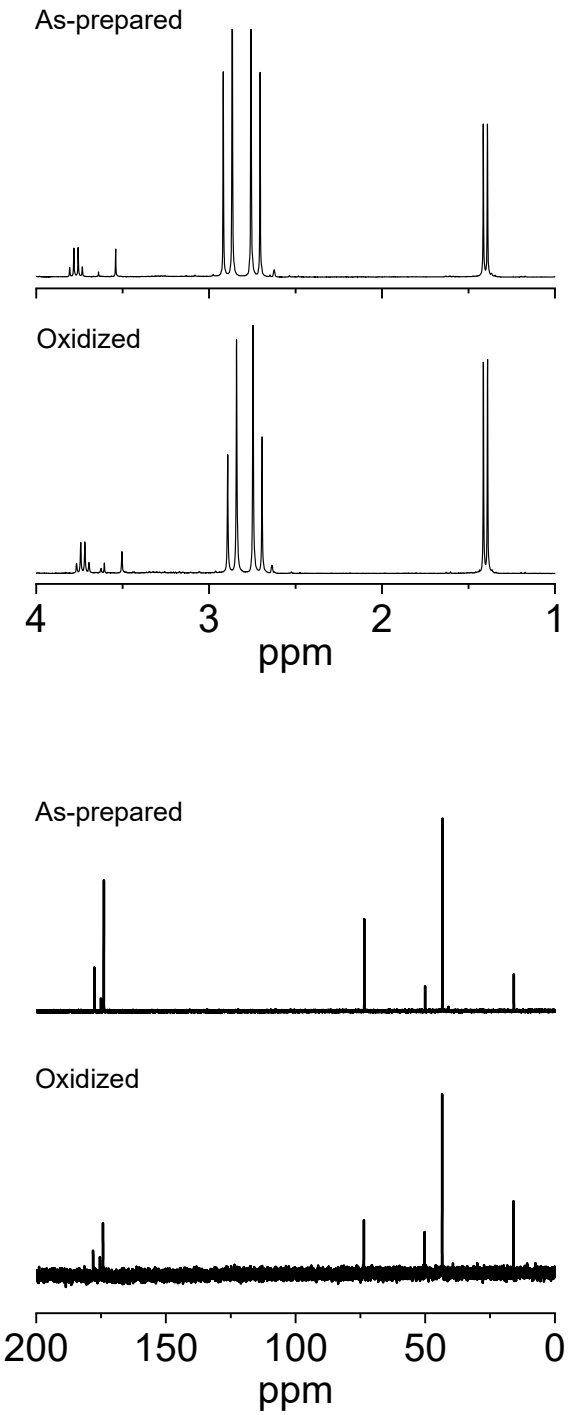

Figure S4| ^{1}H (top) and ^{13}C NMR (bottom) spectra of CND_{C2} in D_2O before and after oxidation with H_2O_2.

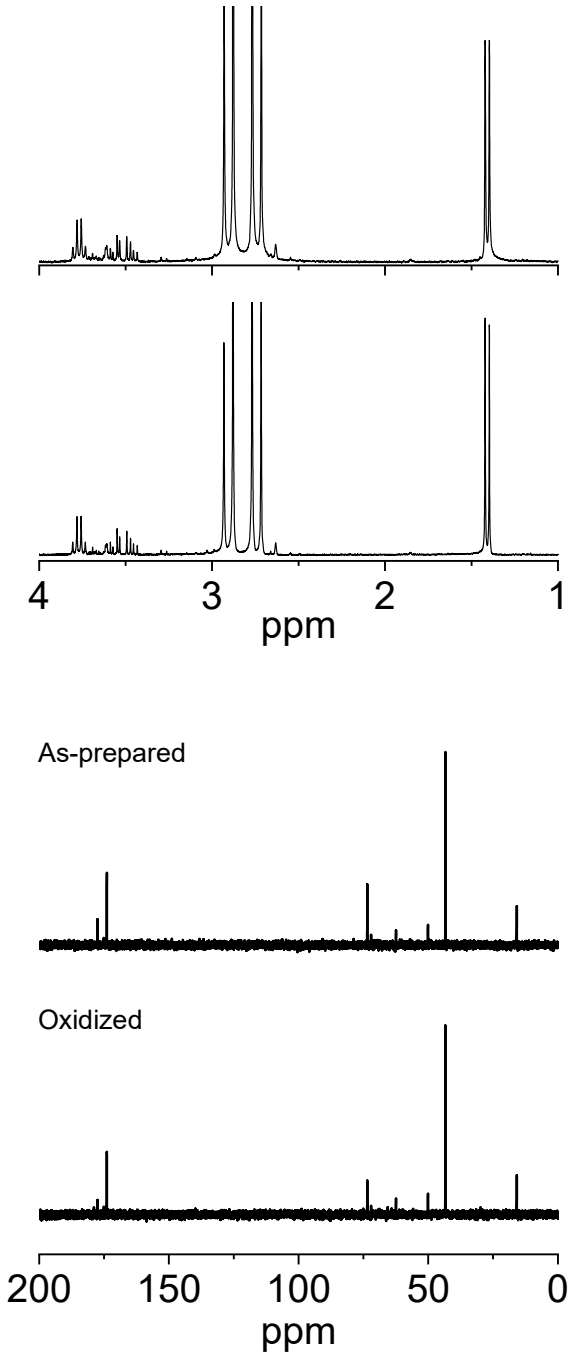

Figure S5| ^{1}H (top) ^{13}C (bottom) NMR spectra of $CND_{Se\text{-}C2}$ in D_2O before and after oxidation with H_2O_2.

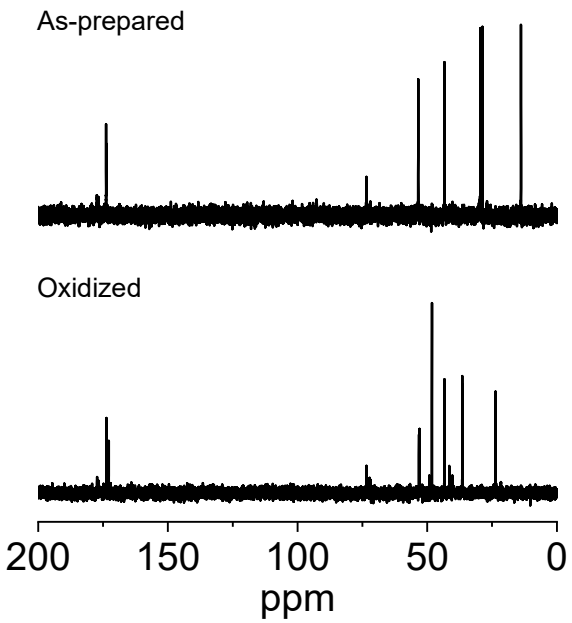

Figure S6| ^{13}C NMR spectra of CND_M before and after oxidation with H_2O_2.

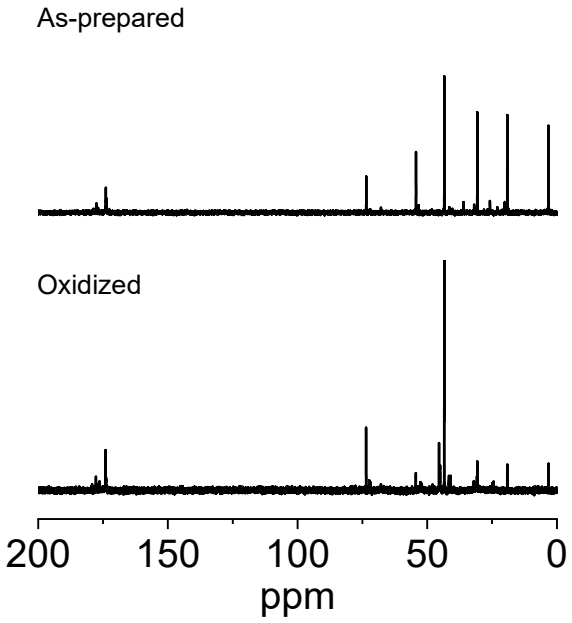

Figure S7| ^{13}C NMR spectra of $CND_{Se\text{-}M}$ before and after oxidation with H_2O_2.

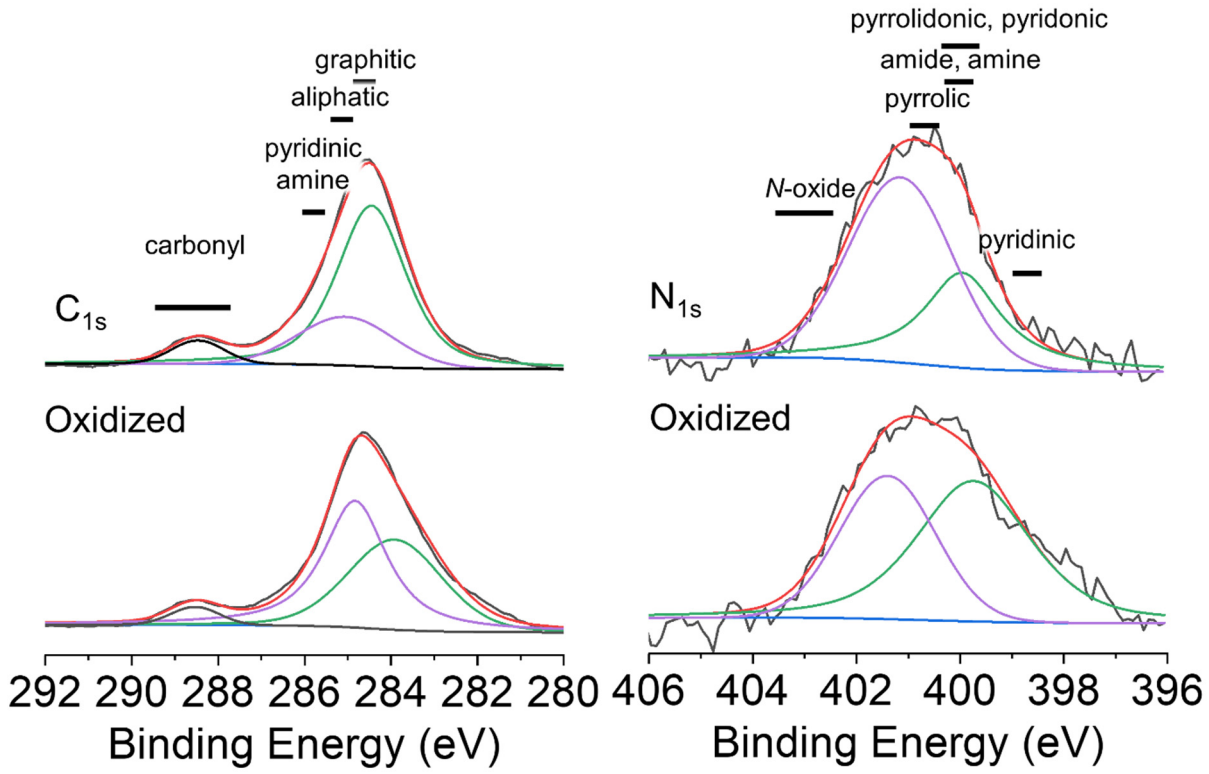

Figure S8| High-resolution XPS spectra (C_{1s}, N_{1s}) of CND_C before and after oxidation with H_2O_2. Spectral decomposition used to guide the eye.

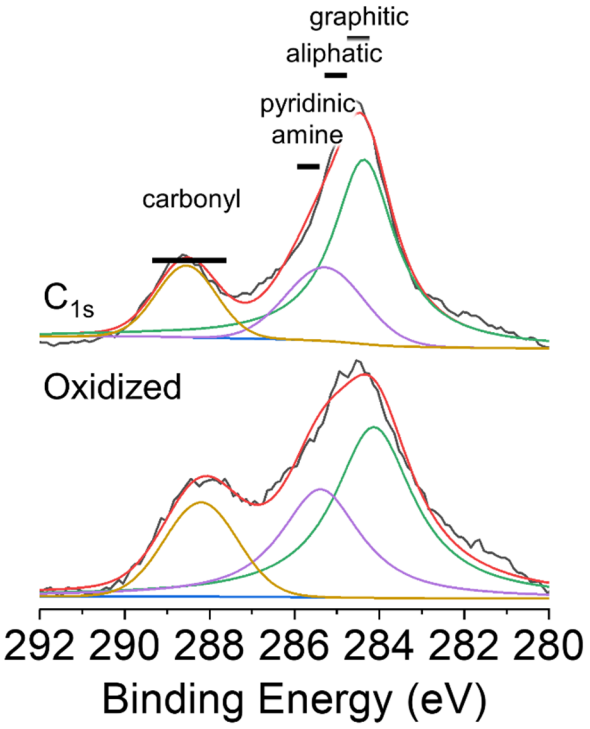

Figure S9| High-resolution XPS spectra (C_{1s}) of CND_{C2} before and after oxidation with H_2O_2. Spectral decomposition used to guide the eye.

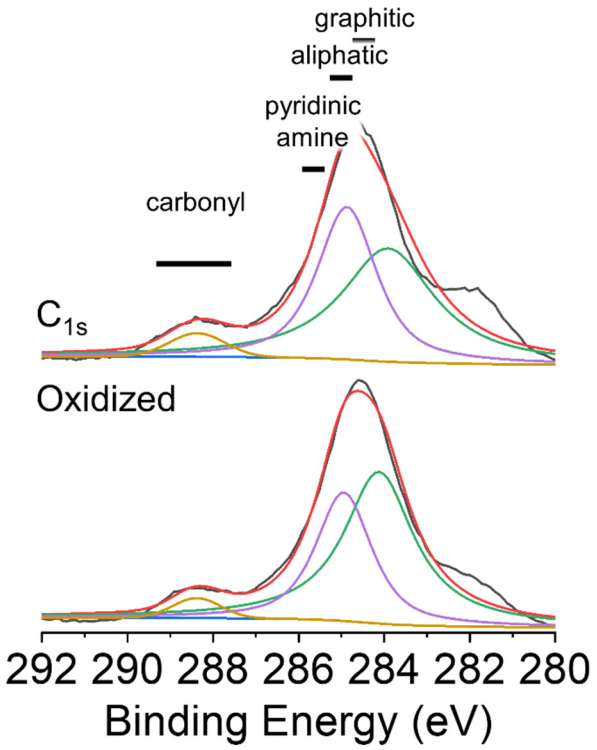

Figure S10| High-resolution XPS spectra (C_{1s}) of $CND_{Se\text{-}C2}$ before and after oxidation with H_2O_2. Spectral decomposition used to guide the eye.

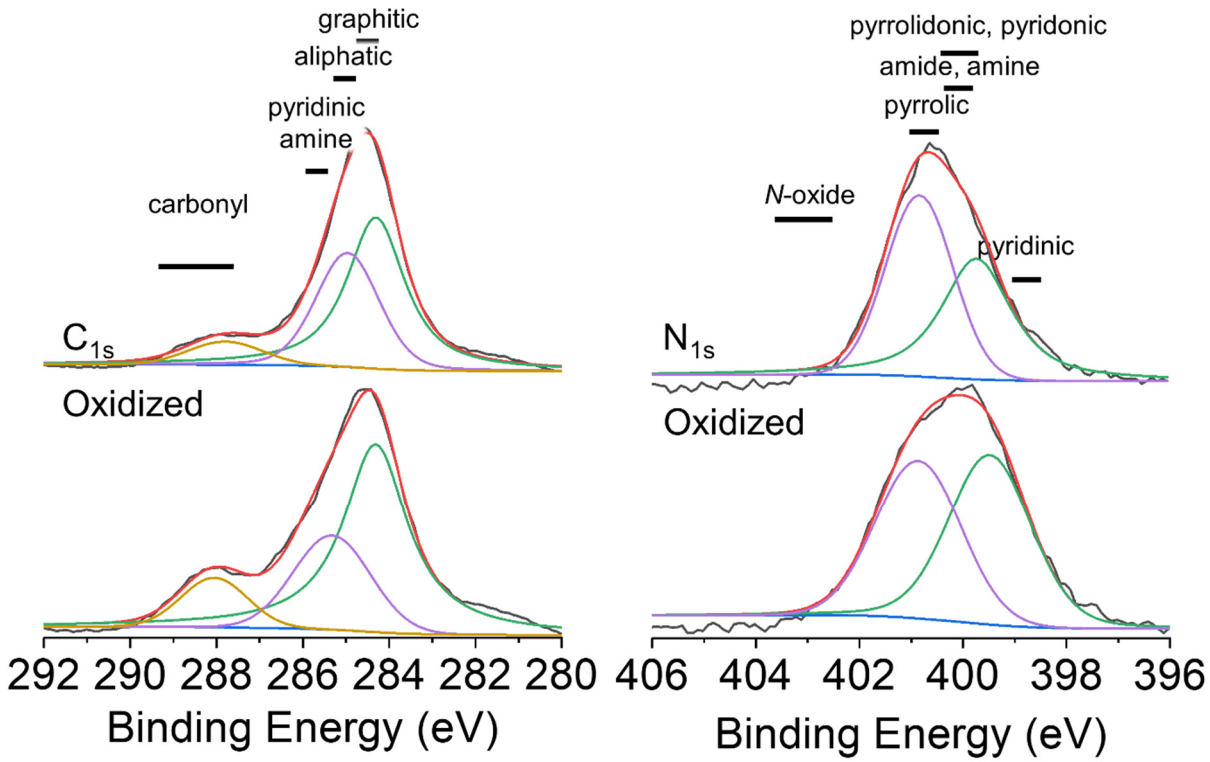

Figure S11| High-resolution XPS spectra (C_{1s}, N_{1s}) of CND_M before and after oxidation with H_2O_2. Spectral decomposition used to guide the eye.

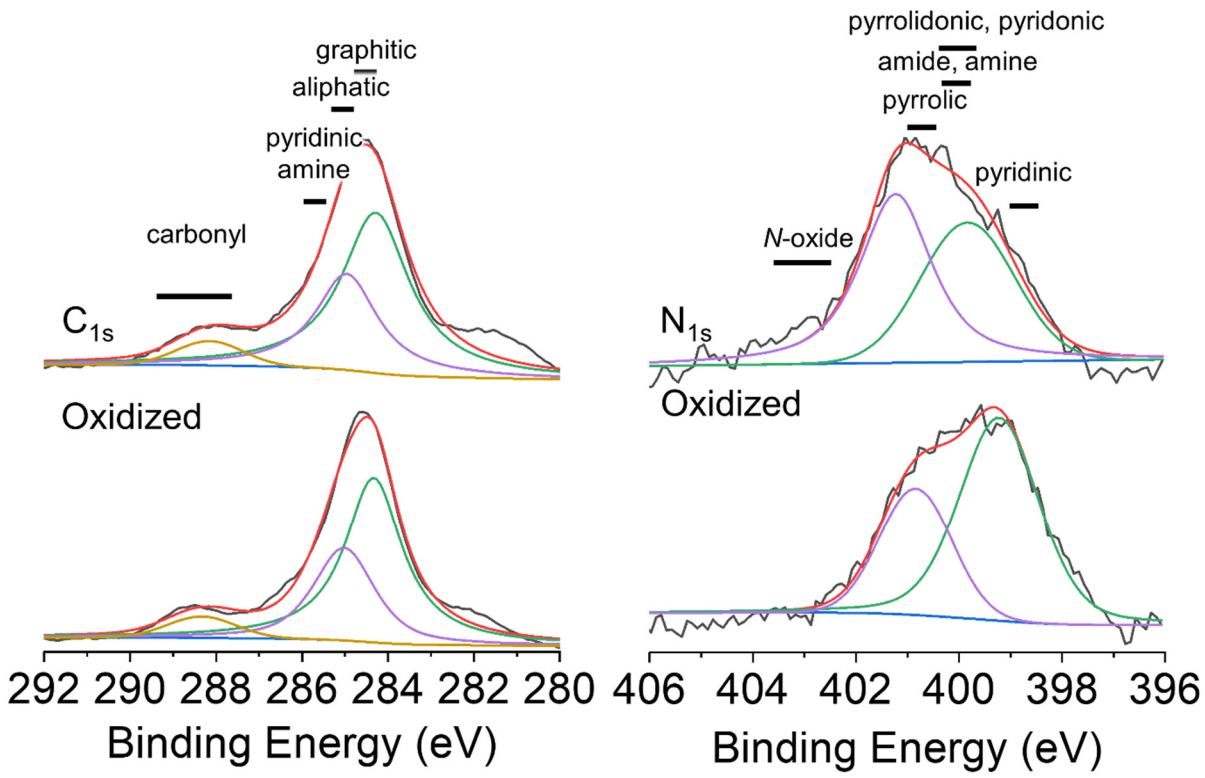

Figure S12| High-resolution XPS spectra (C_{1s}, N_{1s}) of $CND_{Se\text{-}M}$ before and after oxidation with H_2O_2. Spectral decomposition used to guide the eye.

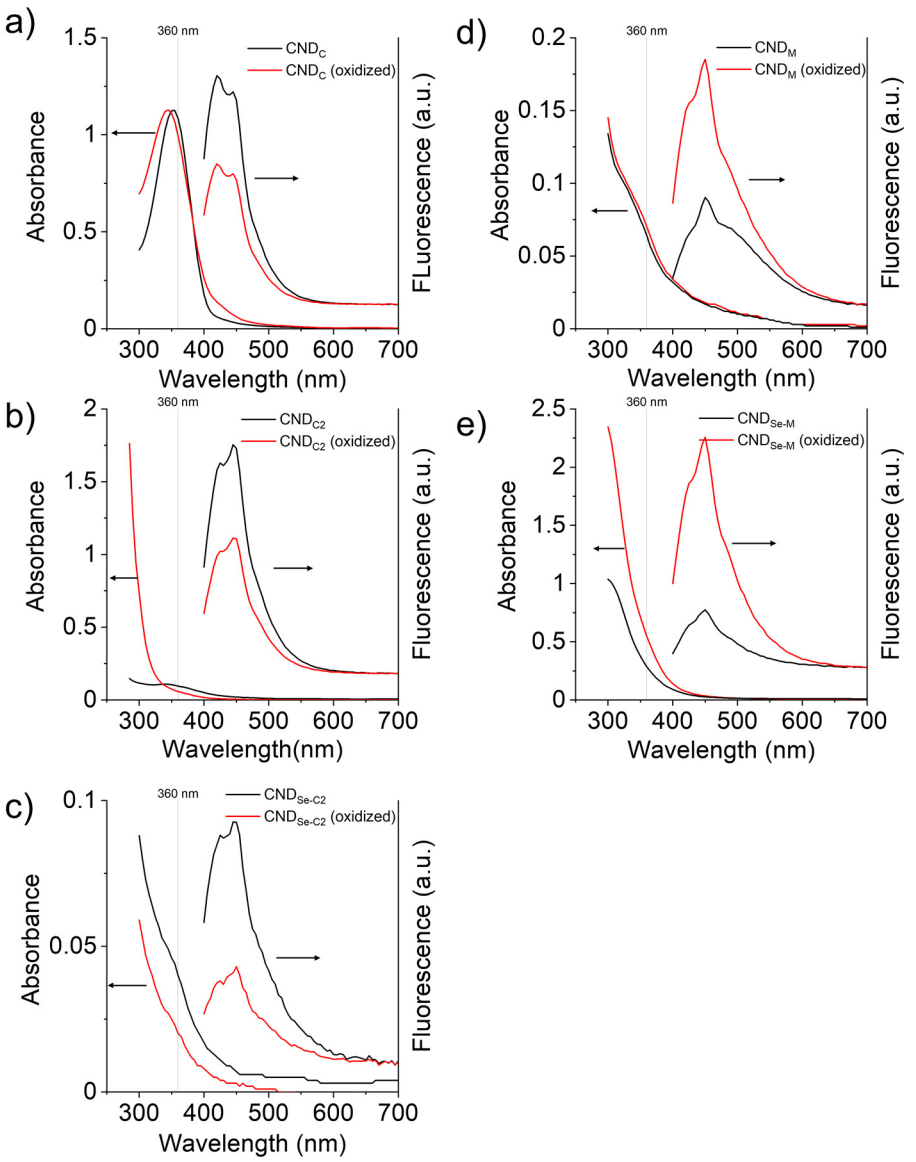

Figure S13| Absorbance and fluorescence spectra (λex 360 nm) of CNDs before and after oxidation.

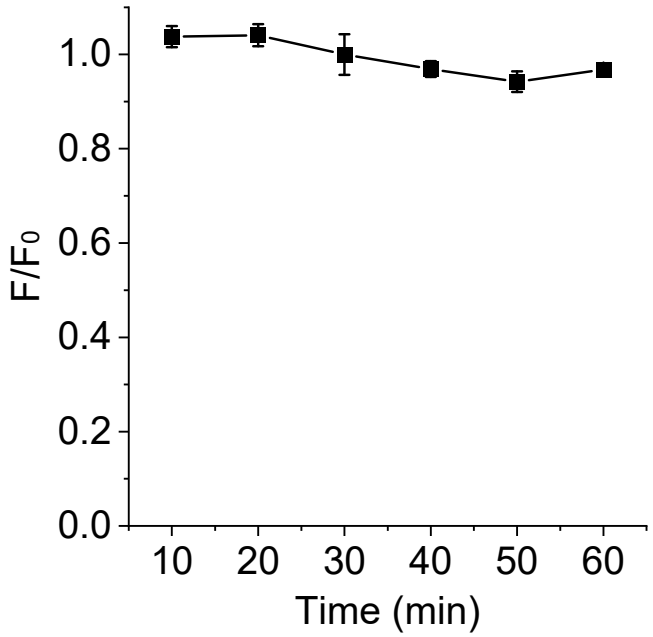

Figure S14| Evolution of fluorescence emission of CND_C with time in 200 mM phosphate buffer pH 7.4 under UV irradiation (256 nm, 4 W). Data presented as Mean ± SD, n = 3.