

Defect-Induced Near-Infrared Photoluminescence of Single-Walled Carbon Nanotubes Treated with Polyunsaturated Fatty Acids

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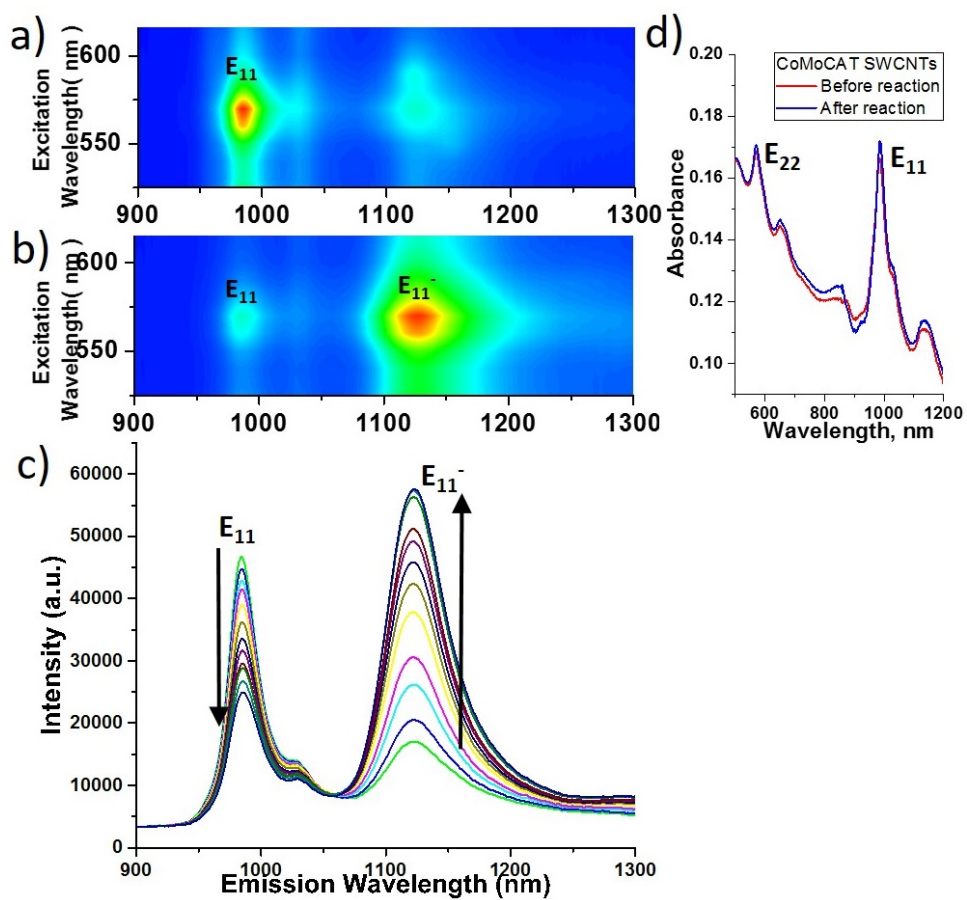


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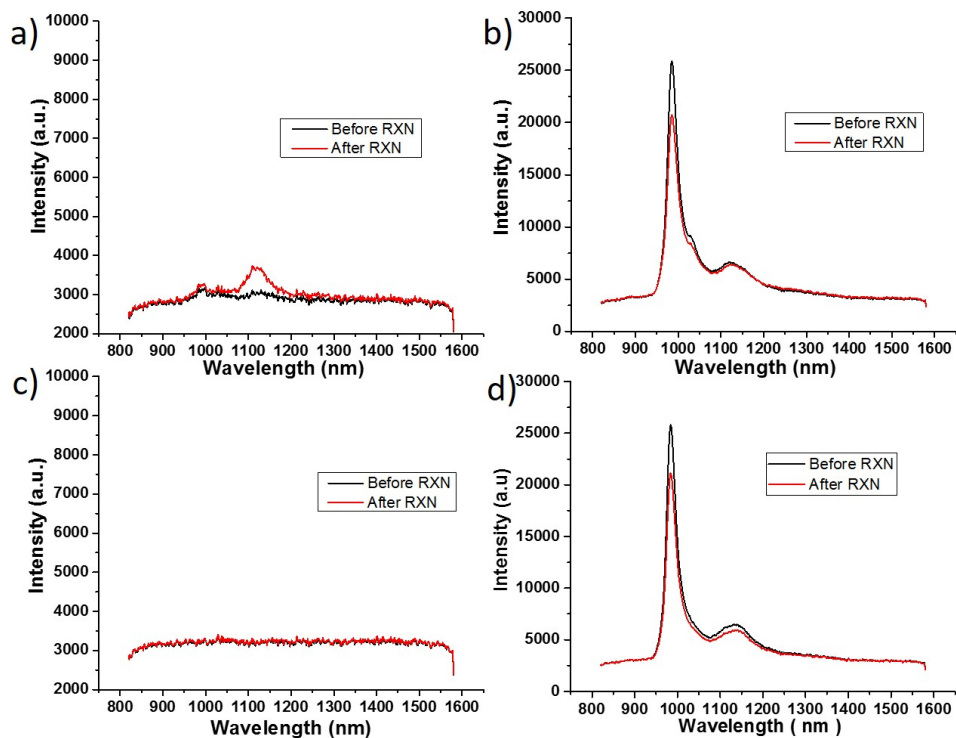


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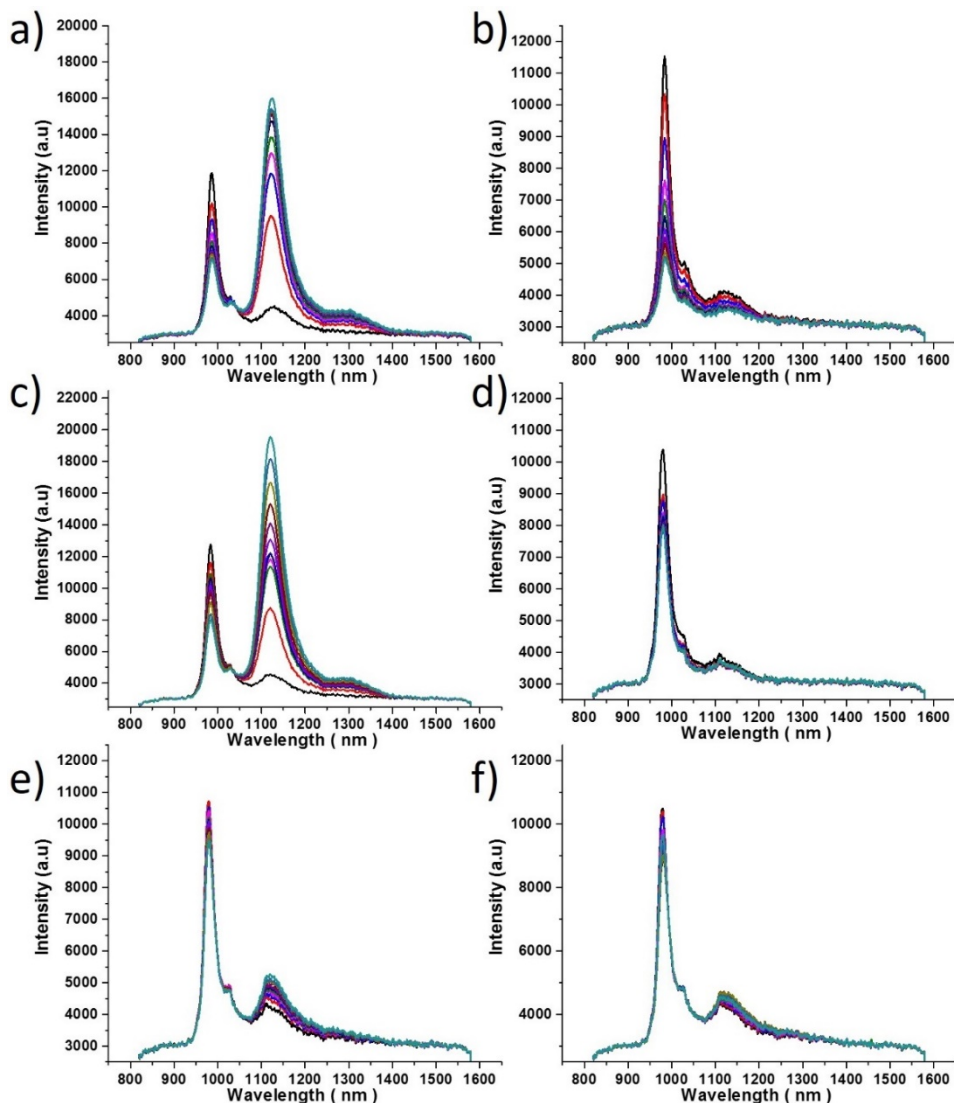


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Table S1. Reaction conditions and calculations for wavelength-dependence experiment.

Wavelength (nm)	Power density (mW/cm ²)	Photon flux (photons per second)	ΔE_{11}	Apparent quantum efficiency (AQE)	Normalized AQE
666	2.93	9.82E+15	1329	1.35E-13	0.11
566	7.49	2.13E+16	26111	1.22E-12	1.00
466	14.22	3.34E+16	1420	4.26E-14	0.03
366	5.18	9.54E+15	1431	1.50E-13	0.12
235	3.14	3.71E+15	89	2.40E-14	0.02

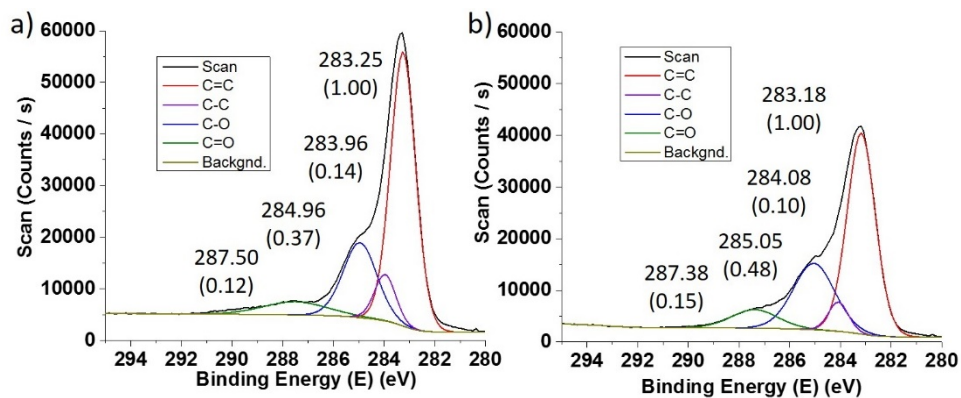


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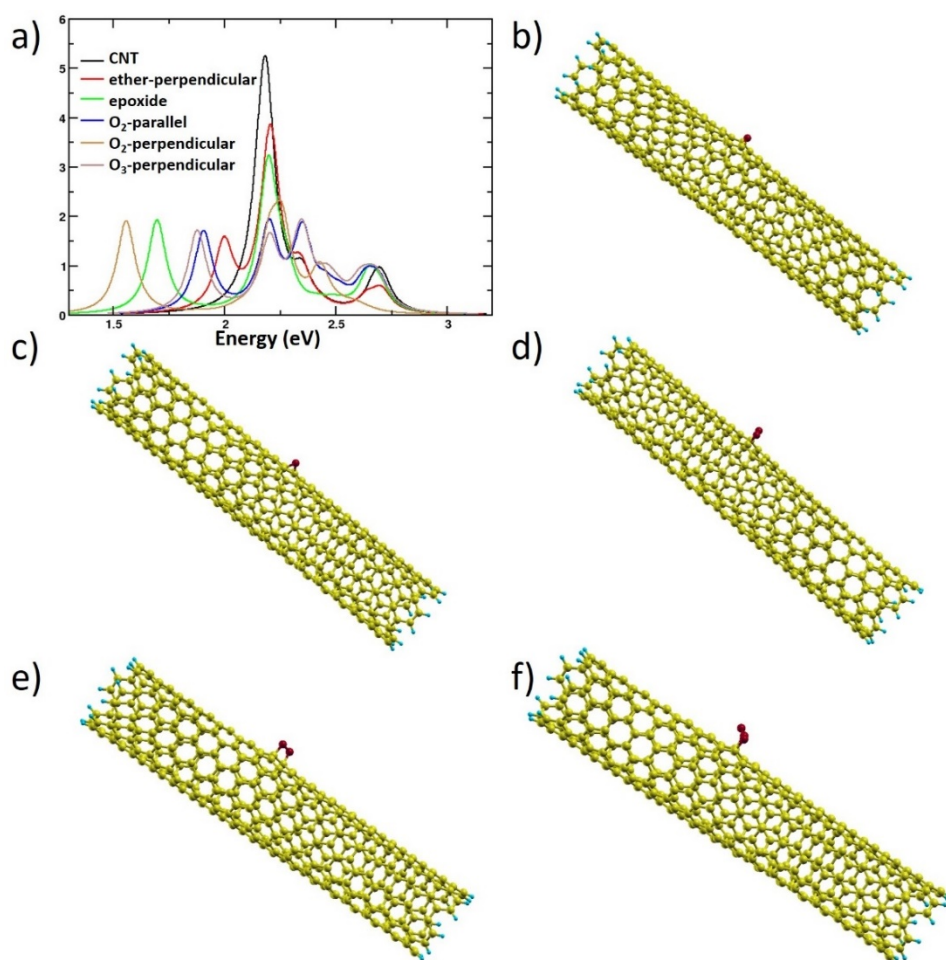


Figure S5. a) The absorption spectra of the pristine and the oxygen-doped CNTs. Optimum adsorption configuration of the CNT with b) ether-perpendicular c) epoxide-parallel, d) O₂-parallel, e) O₂-perpendicular, and f) O₃-perpendicular.

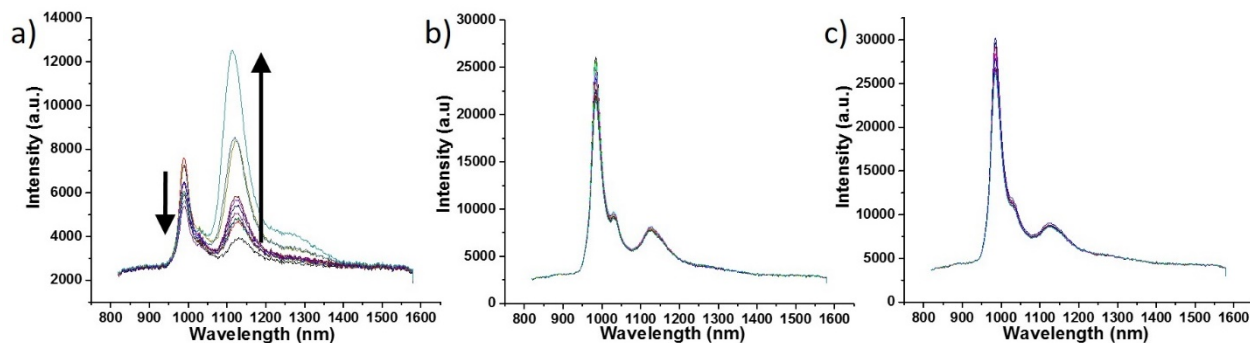


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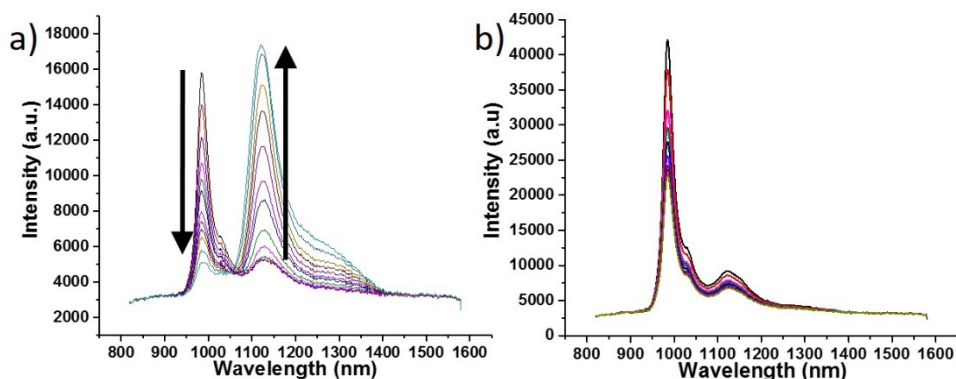


Figure S7. Emission spectra of SWCNTs reacted with a) autoxidized cardiolipin (18:2), and b) non-oxidized cardiolipin (18:2).

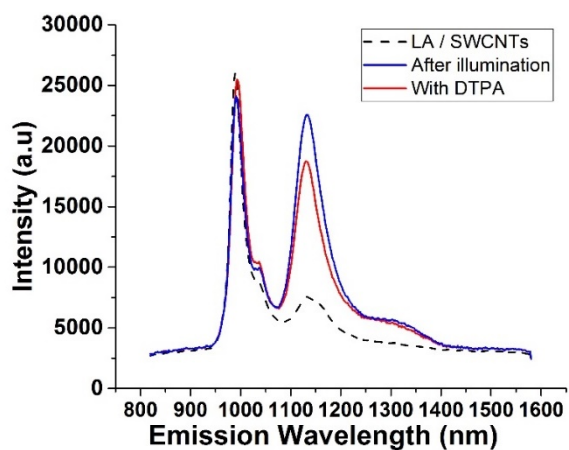


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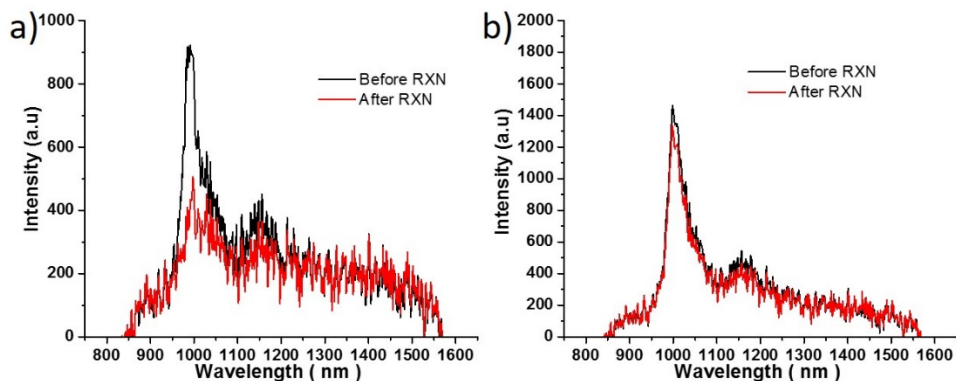


Figure S9. SWCNTs treated with antioxidants, a) ascorbic acid (250 mM) and b) morin (250 $\mu\text{g} / \text{mL}$), before subjected to linoleic acid hydroperoxide and 566 nm excitation light for one hour. No evolvement of the E_{11} emission was observed.

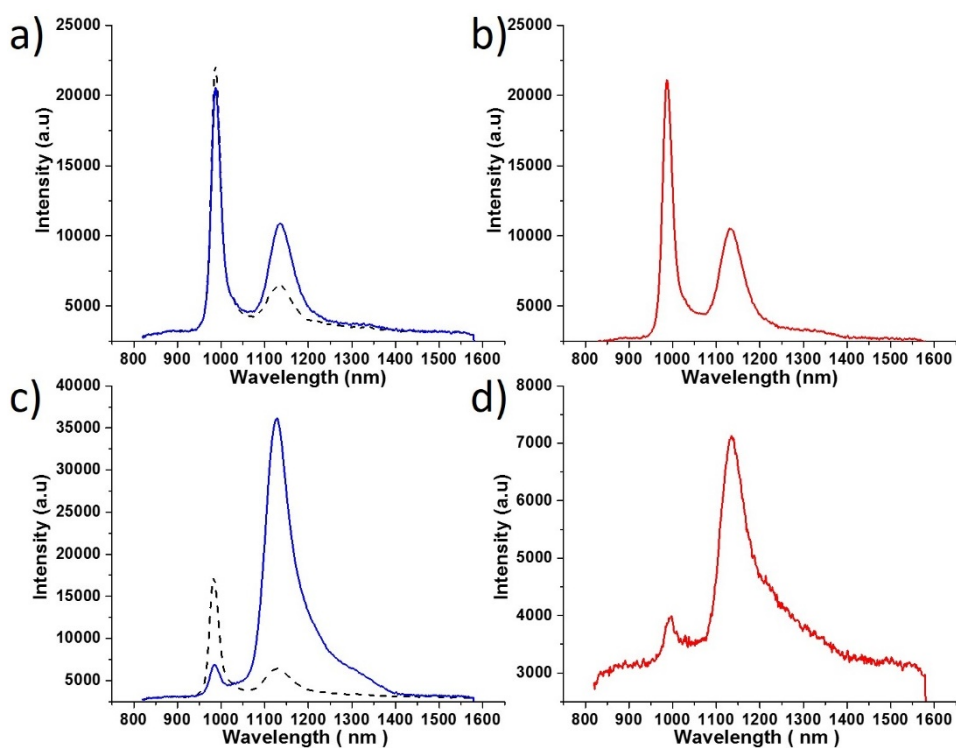


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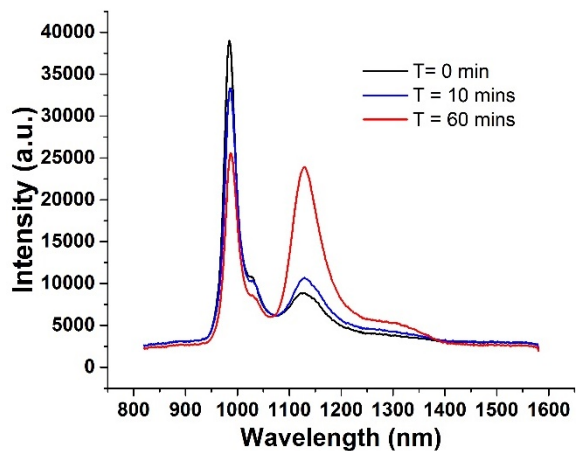


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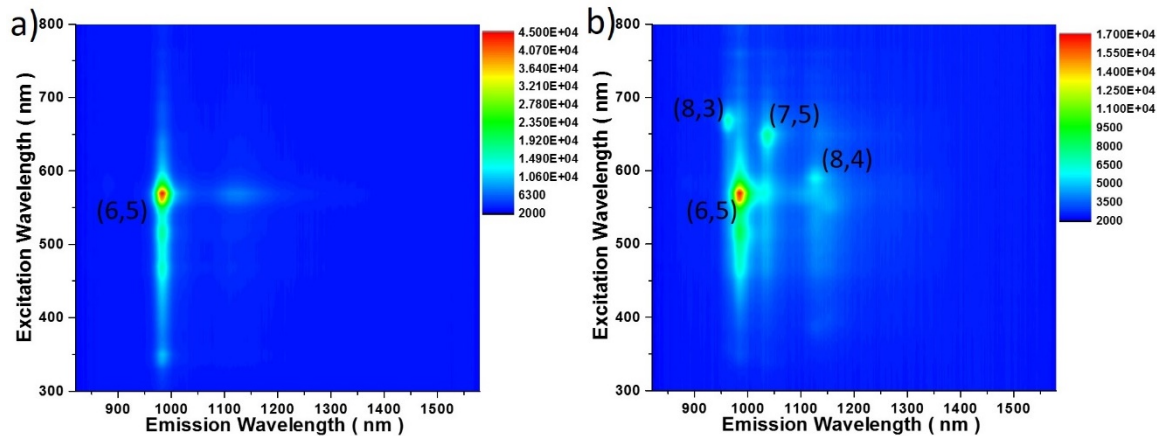


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