

Supplementary Materials: Biodegradation of Single-Walled Carbon Nanotubes in Macrophages through Respiratory Burst Modulation

Jie Hou, Bin Wan, Yu Yang, Xiao-Min Ren, Liang-Hong Guo and Jing-Fu Liu

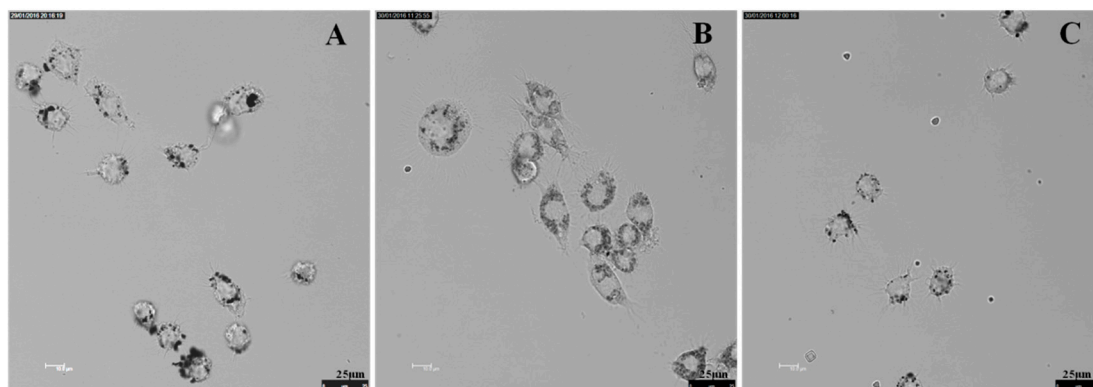


Figure S1. Bright-field images of the SWCNTs in macrophages demonstrate the internalization of CNTs within cells. (A) p-SWCNTs; (B) ox-SWCNTs; (C) OH-SWCNTs (5 $\mu\text{g/mL}$, 6 h). Scale bar = 25 μm .

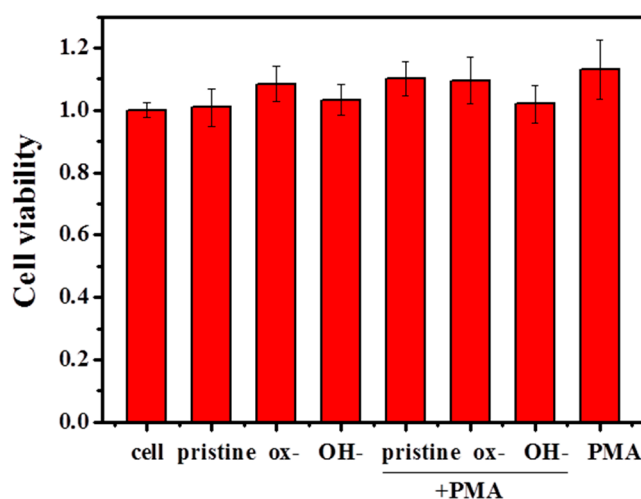


Figure S2. Viability of macrophages under 24 h exposures of different types of SWCNTs (pristine, ox- and OH-SWCNTs, 5 $\mu\text{g/mL}$) with or without PMA (0.5 μM) activation, as measured by WST-1 assay (Roche Applied Science, Bavaria, Germany). Cells were seeded on a 96-well plate and allowed to attach for overnight, after the treatment, 100 μL of WST-1 work solution were added into each well and incubated for 2 h at 37 $^{\circ}\text{C}$, followed by reading absorbance at 490 nm (690 nm for background subtraction).

Table S1. Characteristics (length and diameters) of the SWCNTs before biodegradation.

	Pristine SWCNT ^a	ox-SWCNTs ^b	OH-SWCNTs ^a
Length	5–30 μm	630 \pm 47 nm	5–30 μm
Diameter	1–2 nm	1–2 nm	1–2 nm

^a Data from supplier (Chengdu Organic Chemicals Co., Ltd., Chinese Academy of Sciences, Chengdu, China); ^b ox-SWCNTs were prepared by acid-oxidation of the pristine SWCNTs, and the diameter and length were measured by analyzing 100 individual CNTs in representative TEM images.