**Methods Collection**

**1. Characterization and preparation of MWCNTs and C60F**

* MWCNTs (Mitsui-7) and C60F (Sigma Aldrich) were prepared in a dispersion medium (DM) following a two-step dispersion procedure.
* Transmission electron microscopy (TEM) was used to characterize MWCNTs and C60F.
* Field emission scanning electron microscopy (FESEM) was used to examine morphology of C60F.

**2. Animals and treatment**

* Six-week old male B6C3F1 mice (Jackson Laboratory), 10 mice per treatment at each timepoint, were treated with a single dose of 50 µl of DM, MWCNTs (40 µg/mouse), or C60F (640 or 1,280 µg/mouse) in suspensions by pharyngeal aspiration.
* At day 1, 7, or 28 post-exposure, the mice were euthanized for molecular, immunologic, and pathological examinations.

**3. Macrophage culture, polarization, and treatment**

* Murine monocyte/macrophage cells (J774A.1) were grown in Dulbecco’s Modified Eagle’s Medium with 10% fetal bovine serum.
* M1 polarization was induced with interferon γ (20 ng/ml) plus lipopolysaccharides (100 ng/ml) and M2 polarization was induced with interleukin 4 (20 ng/ml) for indicated time (typically three days).
* Polarized M1 or M2-macrophages were treated with DM or MWCNTs (2.5 µg/ml) for indicated time (i.e., 1, 2, or 3 days post-polarization).

**4. Whole lung lavage (WLL) preparation**

* WLL was performed through the cannula using ice cold Ca2+- and Mg2+-free phosphate buffered saline, pH 7.4.
* Total WLL cell counts were obtained using a Coulter Multisizer 3 and cell differentials were determined by LSR II flow cytometry.

**5. Enhanced darkfield microscopy**

* Enhanced darkfield microscope was used to visualize MWCNTs and their deposition in lung tissue.
* Enhanced darkfield images were taken using an Olympus DP-73 digital camera.

**6. Histopathology**

* The lung was removed, fixed with 10 % neutral buffered formalin, and embedded in paraffin.
* Sections of 5 µm thickness were subjected to hematoxylin and eosin (H&E) staining or Picrosirius red staining.

**7. Flow cytometry for immune cell profiling**

* Cells populations from WLL fluids were gated using LSR II flow cytometer.
* Data were analyzed using FlowJo software.

**8. Cytokine measurement**

* Measurement of cytokines (IFN-γ, IL-1β, IL-6, TNF-α, IL-4, IL-13, and IL-10) in WLL fluids and lung tissue extract was performed by multiplex immunoassay using ProcartaPlex mouse cytokine/chemokine 36-plex kit on a Luminex 200 instrument system equipped with xPONENT software.

**9. Enzyme-linked immunosorbent assay (ELISA)**

* Production of proinflammatory cytokines (LTB4, PGE2) or SPMs (RvD1, LXA4, RvE1) in WLL fluids were measured using ELISA kits with a microplate reader equipped with SOFTmax PRO 4.0.

**10. Immunofluorescent staining and confocal microscopy**

* To detect cellular expression and localization of F4/80, CD68, CD206, ALOX5AP, or ALOX15, immunofluorescent staining was performed in formalin-fixed, paraffin-embedded lung tissue sections (5 µm).
* Images were taken using a Zeiss LSM 780 confocal microscope and captured microscopic images were analyzed using the ImageJ software.

**11. Immunoblotting**

* Detection and quantification of CD68, CD86, CD163, CD206, ALOX5, ALOX15, ALOX5AP, or β-actin.
* Images were scanned using HP scanjet and were used to quantify each band with ImageJ software.