Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Supplementary Figure Caption:

Supplementary Figure 1: Dynamic light scattering (DLS) measurements of zeta-potential values of MWCNT (A), ZnO (B) and MSN (C)

Supplementary Figure 2A: Gene Ontology analysis. Only differentially regulated proteins were subject to Gene Ontology (GO) analysis. These pictures show the up- and down-regulated GO terms for biological processes of the proteins. The blue bars represent proteins regulated by MSN NPs, red bars represent proteins regulated by MWCNT and the green bars represent proteins regulated by ZnO NPs.

Supplementary Figure 2B and C: Gene Ontology analysis. Only differentially regulated proteins were subject to Gene Ontology (GO) analysis. These pictures show the up- and down-regulated GO terms for molecular function (B) and cellular components (C) of the proteins. The blue bars represent proteins regulated by MSN NPs, red bars represent proteins regulated by MWCNT and the green bars represent proteins regulated by ZnO NPs.

Supplementary Figure 2D: Gene Ontology analysis. Only differentially regulated proteins were subject to Gene Ontology (GO) analysis. These pictures show the up- and down-regulated GO terms for protein class of the proteins. The blue bars represent proteins regulated by MSN NPs, red bars represent proteins regulated by MWCNT and the green bars represent proteins regulated by ZnO NPs.

Supplementary Figure 3A: The top 100 proteins performs gene ontologies using panther GO to analysis changes in pathway analysis.

Supplementary Figure 3B: The lowest 100 proteins performs gene ontologies using panther GO to analysis changes in pathway analysis.

Supplementary Figure 3C: The top 100 proteins performs gene ontologies using panther GO to analysis changes in biological process.

Supplementary Figure 3D: The lowest 100 protein performs gene ontologies using panther to examine changes in biological process.

Supplementary Table Caption:

Supplementary Table 1: Body and organ weight values of female rat exposed 14 days.

Supplementary Table 2: Zn and Si values of female rat exposed 14 days.

Supplementary Table 3: Comparative proteomic profile of MSN, ZnO and MWCNT

Supplementary Table 4: Serum TNF-α and IL-1β values of female rat exposed 14 days.