Supplementary Table 1

aggregates/20 μm^2	Mass ($\mu g/cm^2$)	Surface Area ($\mu m^2/cm^2$)
1 - 21	0.005 - 0.11	2.15×10^5 - 4.58×10^6
55 - 81	0.28 - 0.41	1.20×10^7 - 1.77×10^7
90 - 120	0.46 - 0.61	1.96×10^7 - 2.62×10^7
182 - 227	0.93 - 1.15	3.97×10^7 - 4.95×10^7
263 - 283	1.34 - 1.44	5.73×10^7 - 6.17×10^7
295 - 329	1.50 - 1.67	6.43×10^7 - 7.17×10^7
433 - 460	2.20 - 2.34	9.44×10^7 - 1.00×10^8
499 - 534	2.54 - 2.72	1.09×10^8 - 1.16×10^8
768 - 809	3.91 - 4.11	1.67×10^8 - 1.76×10^8
812 - 848	4.13 - 4.31	1.77×10^8 - 1.85×10^8
1305 - 1420	6.64 - 7.22	2.84×10^8 - 3.09×10^8

Supplementary Table 1: Dose metric conversion for the doses used in Figure 4A. The number of NPs expected in an aggregate (median diameter of 117 nm) was calculated according to Sterling et al. (2005), assuming a packing factor of 0.637 and a fractal dimension of 2.3. The cellular doses at the ALI, measured as number of aggregates/20 μm^2, were converted to mass ($\mu g/cm^2$) using density of 5.6 g/cm^3 and to surface area ($\mu m^2/cm^2$) using NP diameter of 25 nm.

Sterling, M. C., Bonner, J. S., Ernest, A. N. S., Page, C. A. and Autenrieth, R. L. (2005). Application of fractal flocculation and vertical transport model to aquatic sol-sediment systems. *Water Res* **39**, 1818-1830.