

**Environment Health and Safety (EHS)**  
(Bibliography of Primary Research)

There are hundreds of scientific articles potentially applicable to nano-related EHS questions. This bibliography is limited to peer-reviewed primary research articles referencing possible EHS risks associated with engineered nanomaterials. Please let us know if you believe there are other primary studies that should be included. Additionally, please contact us if you need assistance in determining how this literature may be applicable to the legal parameters of your nanotechnology activities. Finally, we work closely with toxicologists, epidemiologists, and other scientists who can provide technical summaries and analysis of nano-related EHS literature for your evaluation.

1. "Combustion-derived nanoparticles: A review of their toxicology following inhalation exposure," Donaldson, K., et al., Particle and Fibre Toxicology, Vol. 2, No. 10 (2005).
2. "Comparative Pulmonary Toxicity Assessment of Single Wall Carbon Nanotubes in Rats," Warheit, D. B., et al., Toxicological Sciences, Vol. 77 at 117-125 (2004).
3. "Comparison of the Abilities of Ambient and Manufactured Nanoparticles To Induce Cellular Toxicity According to an Oxidative Stress Paradigm," Xia, T., et al., Nano Letters, Vol. 6, No. 8 at 1794 -1807 (2006).
4. "Correlating Nanoscale Titania Structure with Toxicity: A Cytotoxicity and Inflammatory Response Study with Human Dermal Fibroblasts and Human Lung Epithelial Cells," Sayes, C., et al., Toxicological Sciences, Vol. 92, No. 1 at 174-185 (2006).
5. "Cytotoxicity of single-wall carbon nanotubes on human fibroblasts," Tian, F., et al., Toxicology in Vitro, Vol. 20, No. 7 at 1202-122 (2006).
6. "Direct and indirect effects of single walled carbon nanotubes on RAW 264.7 macrophages: role of iron," Kagan V. E., et al., Toxicology Letters, Vol. 165, No. 1 at 88-100 (2006).
7. "Do Inhaled Carbon Nanoparticles Translocate Directly into the Circulation in Humans?," Mills, N., et al., American Journal of Respiratory and Critical Care Medicine, Vol. 173 at 426-431 (2006).
8. "Exposure to carbon nanotube material: aerosol release during the handling of unrefined single-walled carbon nanotube material," Maynard A. D., et al., Journal of toxicology and environmental health, Vol. 67, Part A at 87-107 (2004).
9. "Exposure to carbon nanotube material: Assessment of nanotube cytotoxicity using human keratinocyte cells," Shvedova, A., et al., Journal of toxicology and environmental health, Vol. 66, Part A at 1909-1926 (2003).
10. "Functionalization density dependence of single-walled carbon nanotubes cytotoxicity in vitro," Sayes, C., et al., Toxicology Letters, Vol. 161, No. 2 at 135-142 (2006).
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12. "In Vitro Interactions between DMSA-Coated Maghemite Nanoparticles and Human Fibroblasts: A Physicochemical and Cyto-Genotoxic Study," Auffan, M., et al., Environmental Science and Technology, Vol. 40, No. 14 at 4367-4373 (2006).
13. "Interfacing Carbon Nanotubes with Living Cells," Chen, X., et al., Journal of the American Chemical Society, Vol. 128, No. 19 at 6292-6293 (2006).

14. "Lung Dosimetry and Risk Assessment of Nanoparticles: Evaluating and Extending Current Models in Rats and Humans," Kuempel, E.D., et al., Inhalation Toxicology, Vol. 18, No. 10 (2006).
15. "Manikin-Based Performance Evaluation of N95 Filtering-Facepiece Respirators Challenged with Nanoparticles," Baazy, A., et al., Annals of Occupational Hygiene Advance Access, Vol. 50, No. 3 at 259-269 (2006).
16. "Manufactured Nanomaterials (Fullerenes, C60) Induce Oxidative Stress in the Brain of Juvenile Largemouth Bass," Oberdörster, E., Environmental Health Perspectives, Vol. 112, No. 10 (2004).
17. "Multi-walled carbon nanotubes induce T lymphocyte apoptosis," Bottini, M., et al., Toxicology Letters, Vol. 160, No. 2 at 121-126 (2006).
18. "Oligonucleotide Adsorption to Gold Nanoparticles: A Surface-Enhanced Raman Spectroscopy Study of Intrinsically Bent DNA," Gearheart, L. A., et al., Journal of Physical Chemistry, Vol. 105, No. 50 at 12609-12615 (2001).
19. "Particle Toxicology: From Coal Mining to Nanotechnology," Borm, P. J. A., Inhalation Toxicology, Vol. 14, No. 33 at 311-324 (2002).
20. "PEG-modified gold nanorods with a stealth character for in vivo applications," Niidome, T., et al., Journal of Controlled Release, Vol. 114, No. 3 at 343-347 (2006).
21. "Pharmacokinetics of Nanoscale Quantum Dots: In Vivo Distribution, Sequestration, and Clearance in the Rat," Fischer, H. C., et al., Advanced Functional Materials, Vol. 16, Iss. 10 at 1299-1305 (2006).
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23. "Synthesis, characterization and preliminary toxicity assays. of NIR-active Au-silicate nanoparticles through a sol-gel processing," Ren, L., et al., Journal of Sol-Gel Science and Technology, Vol. 39, No. 3 at 269-274 (2006).
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25. "Toxicity of gold nanoparticles functionalized with cationic and anionic side chains," Goodman, C., et al., Bioconjugate chemistry, Vol. 15, No. 4 at 897-900 (2004).
26. "Toxicological Hazards of Inhaled Nanoparticles -- Potential Implications for Drug Delivery," Borm, P., et al., Journal of Nanoscience and Nanotechnology, Vol. 4, No. 5 at 521-531(2004).
27. "Toxicological Highlight-Health and Environmental Impact of Nanotechnology: Toxicological Assessment of Manufactured Nanoparticles," Dreher, K., Toxicological Sciences, Vol. 77 at 3-5 (2004).
28. "Toxicological Impact Studies Based on Escherichia coli Bacteria in Ultrafine ZnO Nanoparticles Colloidal Medium," Brayner, R., et al., Nano Letters, Vol. 6, No 4 at 866-870 (2006).
29. "Unusual inflammatory and fibrogenic pulmonary responses to single-walled carbon nanotubes in mice," Shvedova, A., et al., American Journal Physiology-Lung Cellular and Molecular Physiology, Vol. 289 at 698-708 (2005).