

Emerging uses of nanotechnology pose sophisticated occupational health and safety challenges. Involving particles nearing the size of atoms, applications of nanotechnology are revolutionizing our everyday lives — from clothes, computers, and cosmetics, to bridges, buildings, and medicine. According to the National Institute for Occupational Safety and Health (NIOSH), nanotechnology has the potential to account for \$1 trillion of the global economy over the next decade.

As scientists push the frontier of nanotechnology, we are only beginning to understand the potential adverse impacts associated with its applications. Colden's experts are ready to address these highly complex challenges. Environmental exposures to ultrafine particles by skin contact, ingestion, or inhalation are some of the scenarios toxicologists are studying. Regulatory bodies are just beginning to address classical workplace issues regarding anticipation, recognition, and control.

Colden's Services:

- Characterization and source apportionment of nanomaterials in the workplace, including manufacturing environments, laboratories, or other settings
- Assessment of workplace exposure to nanoparticles
- Evaluation of existing or planned methods of controlling exposure to airborne nanomaterials
- Development of risk management programs to address occupational exposure
- Development of programs for worker education and training for the proper handling of nanomaterials and the use of controls to minimize exposure
- Assistance with complying with the NIOSH Recommended Exposure Limit (REL) for the fine and ultrafine size fraction of titanium dioxide