

Sustainable Nanotechnology: Teaching the Workforce

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Sustainable nanotechnology is often thought of as a three legged stool consisting of societal, economic and environmental aspects. As commercialization of electronic, photonic and sensing systems (as well as others) approaches the nanoscale, it is critical that those currently in the workforce and those that are being trained are aware of the aspects of sustainable nanotechnology. Aspects such as toxicity, risk, exposure, benefits, trade-offs, threshold values, regulatory and cost all need to be considered at various stages of development and commercialization.

These aspects of sustainability are being incorporated into a two year nanoscience technologist program. During the 2 years of the program all aspects are introduced to the students included cost/benefit analysis, regulatory studies (and global regulatory aspects), risk analysis as well as research projects that study the impact on engineered nano materials on biological systems.

This presentation will review sustainable nanotechnology, the various aspects and provide examples of how sustainable nanotechnology can be included in educational programs - not only for current students but also for the current workforce.