

Robert D. Tilton, Professor

Departments of Biomedical Engineering and Chemical Engineering, Carnegie Mellon University
Ph.D., 1991, Stanford University



Professor Tilton's group investigates phenomena in the spaces where fundamental nanoscale colloid science intersects with biomedical or environmental systems. His group is developing surfactant-based self-dispersing aerosolized carriers for enhanced drug delivery in obstructed lungs, in parallel with fundamental studies of adsorption and surface tension driven flows in complex fluids. His group also addresses the physical and toxicological interaction of engineered nanomaterials with microbial communities in relation to the environmental implications of nanotechnology, in parallel with fundamental studies of the thermodynamic and mechanical properties of nanostructured materials and interfaces. The common thread linking all projects in the group is the controlling role played by fundamental colloidal and interfacial phenomena. Professor Tilton is a Fellow of the American Institute for Medical and Biological Engineering and a Fellow of the American Chemical Society.

