

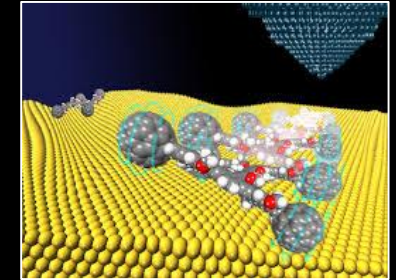


Biological and Environmental Interactions of Nanoscale Materials

Program Goal: support research focused on fundamental and quantitative understanding of the **interactions of biological and ecological matrices with nanostructured materials and nanosystems**

- **Characterization of interactions at the interfaces** between nanomaterials and nanosystems with surrounding biological and environmental media, including both simple nanoparticles and complex and/or heterogeneous composites;
- **Development of predictive tools** based on the fundamental behavior of nanostructures within biological and ecological matrices to advance cost-effective and environmentally benign processing and engineering solutions over full life material cycles;
- **Examining the transport, interaction, and impact** of nanostructured materials and nanosystems on biological systems;
- **Simulations of nanoparticle behavior** at interfaces, in conjunction with experimental comparisons, and **new theories and simulation approaches** for determining the transport and transformation of nanoparticles in various media.

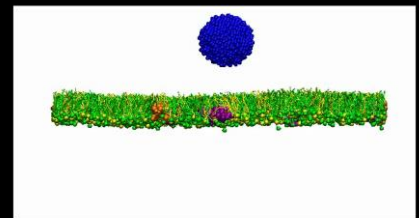
Program Director: Nora Savage, nsavage@nsf.gov



Sample Award

CAREER: Biophysical Mechanisms of Pulmonary Surfactant and its Interactions with Therapeutic Agents

*Yi Zuo, University of Hawaii
CBET 1560767*



Sample Award

CAREER: Multiscale Study of the Structure and Dynamics of Nanoparticle-Protein Coronae

*Feng Ding, Clemson University
CBET 1553945*