

Nanotechnology for Water, Food and Energy Systems

**2016 NSF Nanoscale Science and Engineering Grantees Meeting
December 12-13, 2016, Arlington, VA**

Panel 1

Day 1: Progress in Foundational Nanotechnology and Infrastructure

Setting the Stage

- **As nanotechnology continues to advance, the research agenda is increasingly focused on addressing key questions related to global sustainability over the next 10-20 years:**
 - Can nanotechnology help address the challenges of improving global sustainability in energy, water, food, materials supply, shelter, transportation, healthcare and employment?
 - Can nanotechnology be developed in a sustainable manner with maximum societal benefits and minimum impact on Earth's global environment and climate?

Charge and Objectives

- Highlight and discuss the utilization of nanotechnology to advance and achieve a **sustainable water-food-energy nexus**
- Provide a retrospective and an outlook of the-state-of-the-field
- Bring into focus crosscutting scientific, technological and societal issues associated with the development and implementation of nanotechnology-based solutions for achieving **a sustainable water-food-energy nexus**

Overarching Questions

- 1) What are the unique contributions that Nanotechnology can make to advance a sustainable water-food-energy nexus?
- 1) What are current grand challenges that can be addressed in the next decade?
- 2) How do we handle the gap between basic discovery and translation to applications?

Panelists and Invited Speakers

- 1) **Moderators:** Mamadou Diallo (Caltech), Nora Savage (NSF) and Hongda Chen (USDA)
- 1) **Keynote Speaker:** Pedro Alvarez (Rice University)
- 2) **Panelists:** Karen Wooley (Texas A&M University), Gregory Lowry (Carnegie Mellon University) and Mamadou Diallo (Caltech)