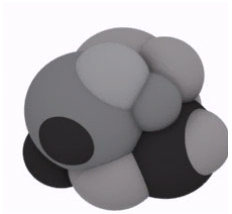
Nanoparticle Air Monitoring Workshop

March 2 – 3, 2009

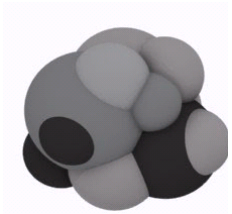
Hosted by U.S. EPA and Battelle

Welcome and Logistics



- Welcome Everyone
- Acknowledgements
- Facilities
  - Cafeteria
  - Rest Rooms
  - Phone Bank
- Anything Else – Just Ask!!

Agenda



1:00 pm Welcome and Introductions
Logistics
Objectives and Opening Remarks
Dennis Mikel, EPA
Karen Riggs, Battelle

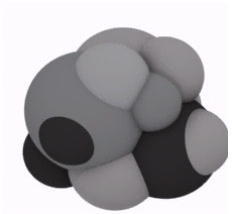
1:30 pm Session #1: Implications and Drivers ("Setting the Stage")
Daniel Vallero, U.S. EPA/Office of Research and Development
Aleksandr Stefaniak, NIOSH
Bruce Anderson, NASA
William LaFountain, US Air Force

Break

3:30 pm Session #2: Technology Needs and Gaps
Chris Carroll, US Army Center for Health Promotion and Preventive Medicine
Craig Wall, Agilent Technologies

End of Day 1

Objectives

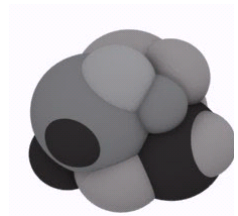


- The National Nanotechnology Initiative states,

"*Analytical methods for identifying and measuring the critical parameters related to nanomaterials in biological systems, the environment, and the workplace are not well developed or readily available*" (NNI 2/08 strategy document).

- EPA – OAQPS' Goal:
  - What are the technology gaps and needs?
  - What will it take to fill those gaps?
  - What do we present to EPA management?

Agenda



Tuesday, March 3, 2009

8:30 am Session #2: Technology Needs and Gaps (Cont'd)

Mengdawn Cheng, Oak Ridge National Laboratory
Andrew Persily, NIST

10:00 am Session #3: Implications and Drivers Discussion – Karen Riggs/Tom Driscoll

Review and discuss priority questions
Collect input/thoughts from all participants

12:00 pm Lunch

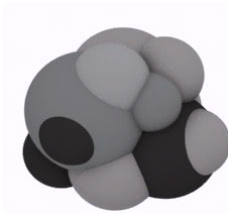
1:00 pm Session #4: Technology Needs Discussion – Dennis Mikel/Tom Driscoll

Review and discuss priority questions
Collect input/thoughts from all participants

3:00 pm Path Forward/Actions

4:00 pm Departure

Priority Questions # 1



- **Implications and Drivers (“Setting the Stage”)**
  - What are the important or significant processes that now or will cause nanoparticles to be emitted into the air environment?
  - Which organizations, now or in the future, need to measure nanoparticles in emissions or ambient/indoor air?
  - Will such measurements be driven by regulatory compliance, process monitoring, or industrial hygiene purposes?
  - What is the regulatory climate at this time?

Priority Questions #2

Technology Needs and Gaps

- How applicable are the existing size measurement instruments? Are these sufficient?
- What characteristics (physical or chemical) should we focus on to identify and quantify nanoparticles?
- Should the focus be on anthropogenic or naturally occurring particles?
- Should we try to classify these particles into some types or groups?
- Do we need real-time measurement techniques?
- What considerations should be made about fate and transport?

Priority Questions #2a

Technology Needs and Gaps

- **Terminology**
- **Standards**
- **Instruments – Technology**
- **Metrics**