Aerosol Surface Chemistry

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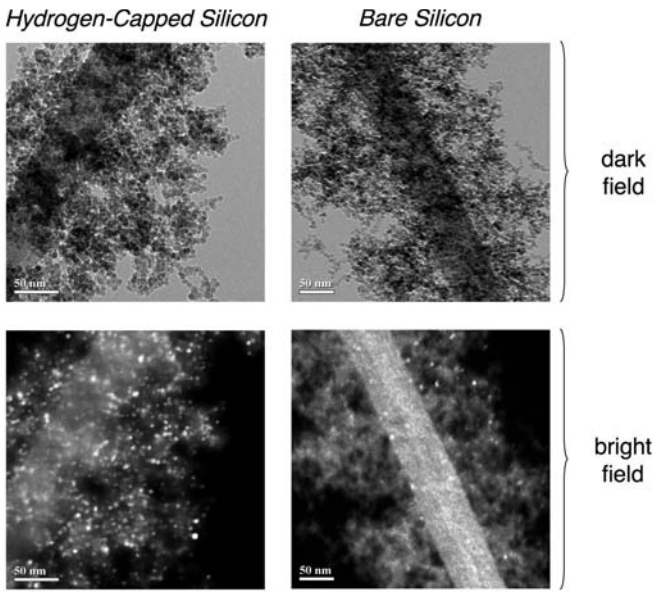
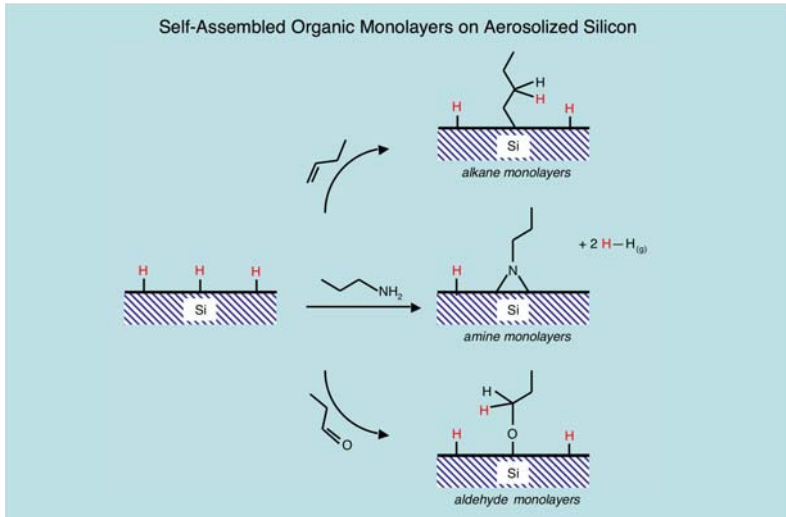
NNIN Facilities utilized: Characterization Facility & Particle Technology Laboratory

- Surface modification of aerosols.
  - New methods of analysis.
  - Aerosols for materials applications.
  - Environmental aerosols.



- MAJOR OBSERVATIONS
  - Self-assembled monolayers on Si nanoparticles.
  - Photo- and thermal-CVD for core-shell structures.
  - Surface-control of nanostructure.



- Publications
  - "Surface Chemistry of Aerosolized Nanoparticles: Thermal Oxidation of Silicon." Y.-C. Liao, A. M. Nienow, J. T. Roberts. *Journal of Physical Chemistry B*, **2006**, *110*, 6190-6197.
  - "Self-Assembly of Organic Monolayers on Aerosolized Silicon Nanoparticles." Y.-2C. Liao and J. T. Roberts. *Journal of the American Chemical Society*, **2006**, *128*, 9061-9065.
  - "Chemical Vapor Deposition of Zirconium Oxide on Aerosolized Silicon Nanoparticles." A. M. Nienow, J. T. Roberts. *Chemistry of Materials*, **2006**, *18*, 5571-5577.