

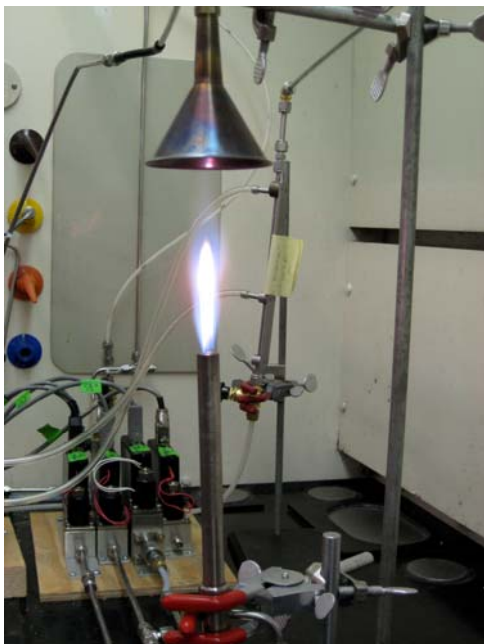
# Characterization of Highly Agglomerated Nanoparticles

Peter H. McMurry, Jacob Scheckman, Chris Frethem

Particle Technology Lab, Mechanical Engineering, University of Minnesota

NNIN Facility utilized: Characterization Facility

- ◆ Propane flame soot production
- ◆ SiO<sub>2</sub> nanoparticle production
- ◆ Particle size vs. Mass
- ◆ Effects of burner flow rates characteristics of product particles
- ◆ Image analysis



## MAJOR OBSERVATIONS

- ◆ Primary particle size: ~30 nm
- ◆ Particle morphology: chain agglomerates
- ◆ Particle structure: fractal

