

# Project 6 – Nanotechnology

Tracey Greeley

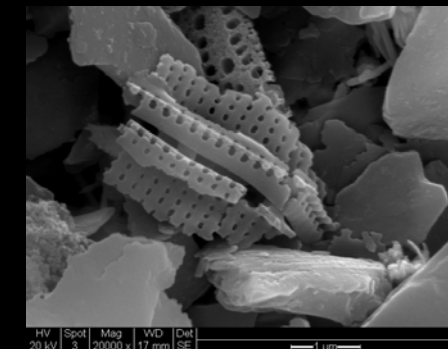
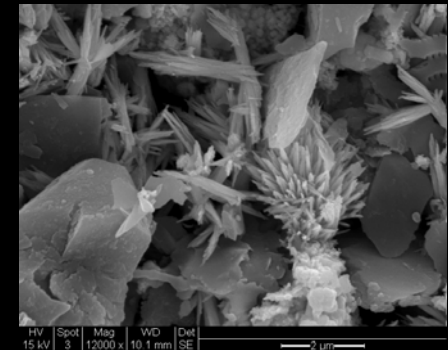
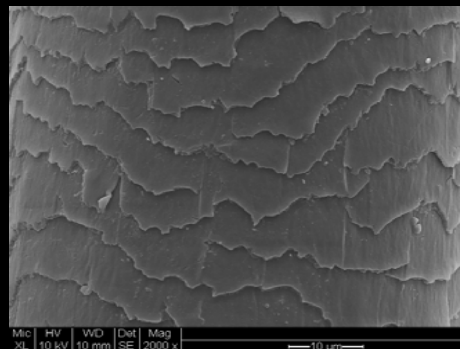
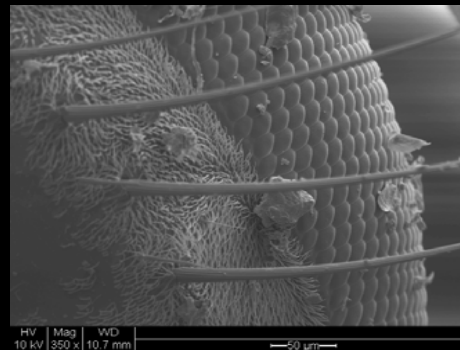
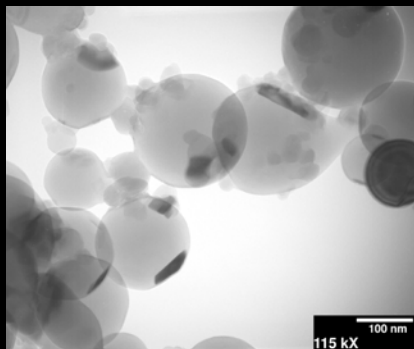
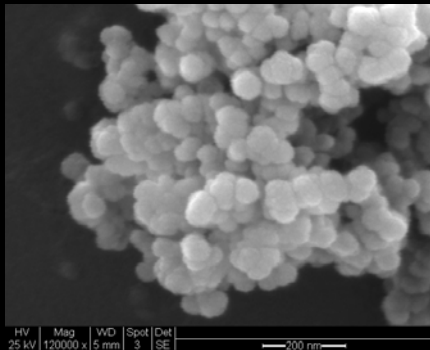
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# Project 6 – Nanotechnology

## Part I

- Introduction to structures and size scales
  - ‘how nano is nano?’
  - hierarchy of structure
  - magnification (microscopic analysis)
- Chemistry of nanoparticles
  - ‘green synthesis’ of gold nanoparticles
  - reduction of  $\text{AuCl}_4$  via honey and *hibiscus*
- Characterization
  - Imaging (physics)
  - Size/structure analysis (math and physics)



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## Part II

- Consumer applications for nanotechnology
  - Hair care: dyes and conditioners
  - Facial care: makeup, sunscreen, cleansers
- Nanotechnology and dentistry
  - Toothpaste, mouthwash, whiteners
  - Tooth restoration (fillings, crowns, implants)
- Nanotechnology in nature
  - bones and teeth
  - insects

