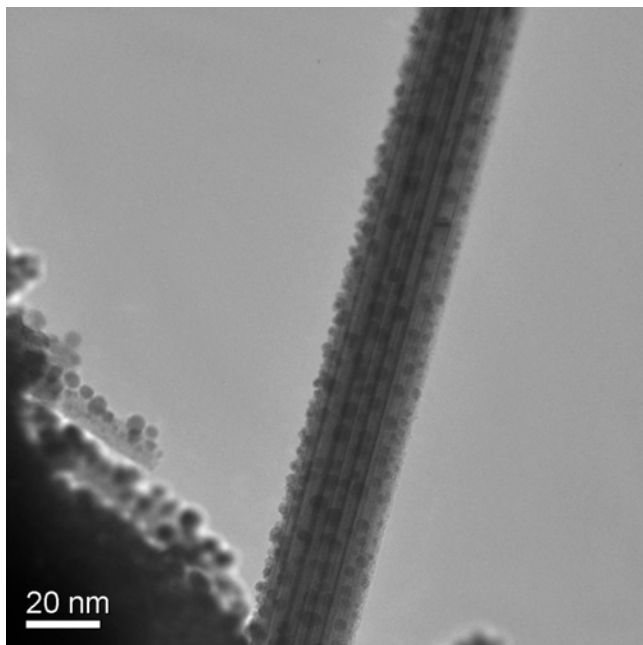


Formation of Gold Nanoparticle/Carbon Nanotube Hybrid Materials

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NNIN Facility utilized: Characterization Facility

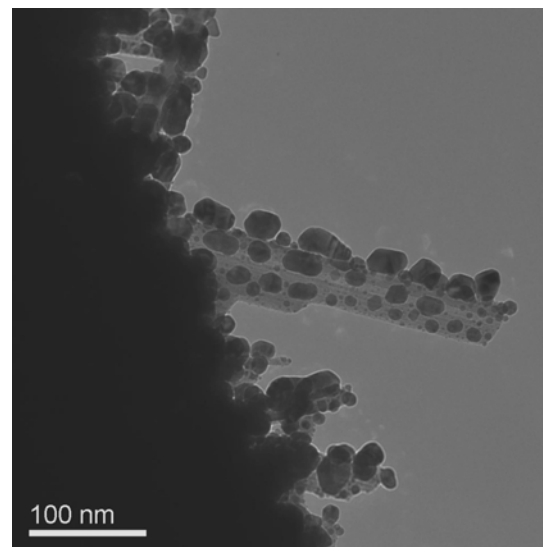
- Evaporation of Au onto Carbon Nanotubes (CNTs)

- ◆ Evaporated Au onto multiwalled CNTs grown on W substrates.
- ◆ Examined Au decorated CNTs by TEM to determine the impact of evaporation conditions on nanoparticle size and distribution.
- ◆ Possible applications as catalysts, fuel cell materials, and electrochemical sensors



- Factors Affecting Particle Size and Distribution

- ◆ The largest effect on particle size and distribution was due to changes in the amount of material evaporated, whereas other parameters such as evaporation rate and substrate temperature had little observable effect.
- ◆ Particles are, in contrast to previous reports, well distributed on the CNT surface without any oxidative pretreatment of the CNT.



- Publications

- ◆ Formation of gold nanoparticles on multiwalled carbon nanotubes by thermal evaporation, Gingery, D., and Bühlmann, P., submitted.