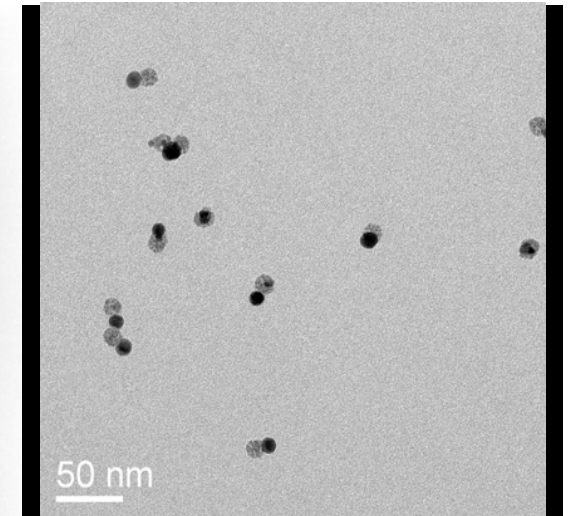
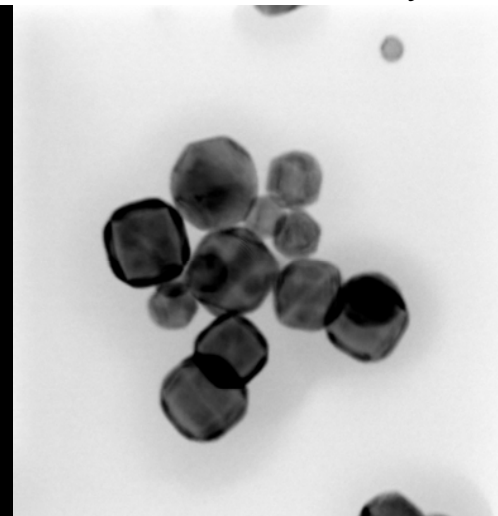
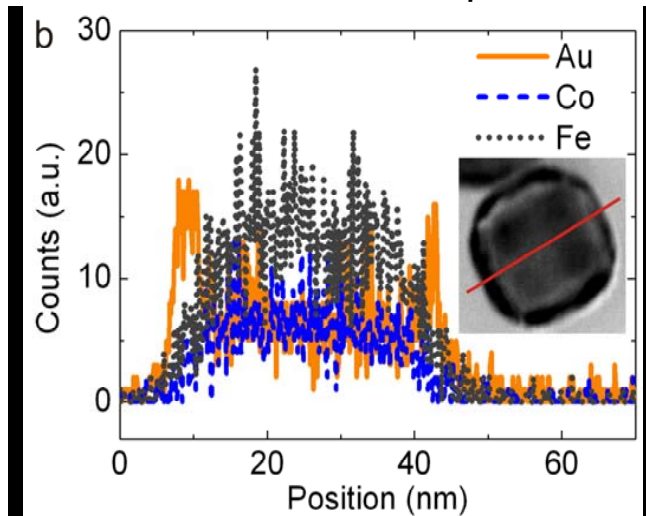


Heterostructured Multifunctional Nanoparticles

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NNIN Facility utilized: Characterization Facility

- Synthesis of heterostructured nanoparticles through a novel gas phase condensation technique.
 - ◆ Core-shell structure FeCo-Au and Fe(Co)Si-SiO₂ nanoparticles
 - ◆ Dumb-bell structure Fe-Ag nanoparticles
 - ◆ Cubic and Spherical FeCo, Fe, Ni nanoparticles
- Combination of
 - ┌ Magnetic
 - ├ Optical, Semiconductor
 - └ Bio-compatible → Bio-medical application
Energy materials
Catalyst



- ◆ "Direct gas-phase synthesis of heterostructured nanoparticles through phase separation and surface segregation", Y.-H. Xu, J.-P. Wang, Adv. Mater. 20 (2008) 994-999
- ◆ "FeCo-Au core-shell nanocrystals", Y.-H. Xu, J.-P. Wang, Appl. Phys. Lett. 91 (2007) 233107
- ◆ "High-magnetic-moment multifunctional nanoparticles for nanomedicine applications", Y.-H. Xu, J. Bai, J.-P. Wang, J. Magn. Magn. Mater. 311 (2007) 131-134.