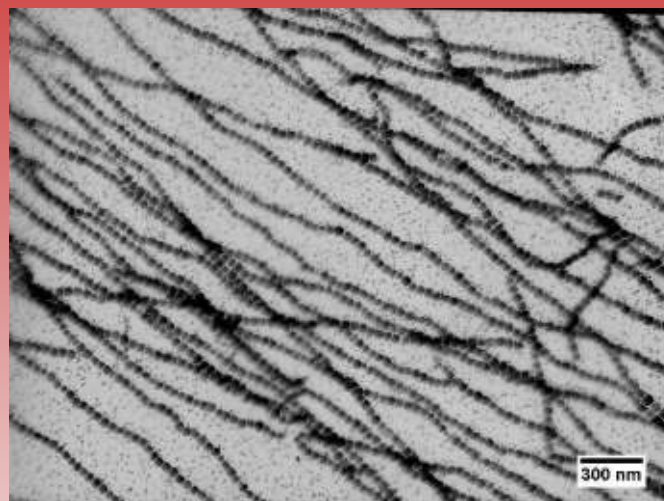


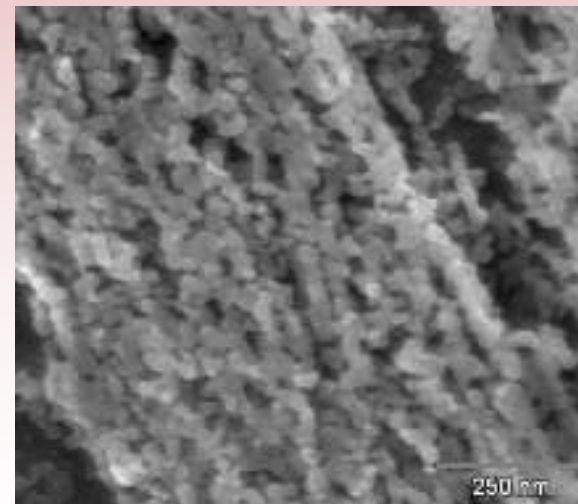
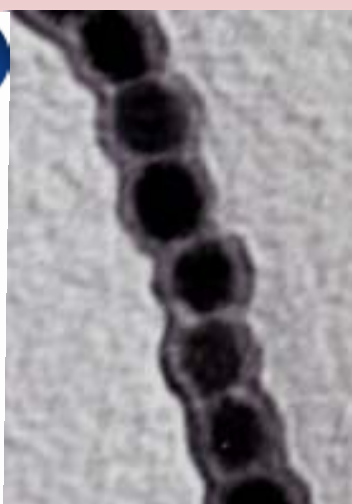
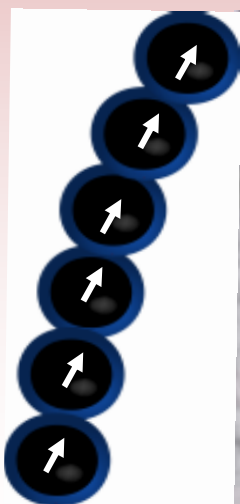
Synthesis of Metal-Filled Carbon Nanoparticle Chains from Polyacrylonitrile Functional Magnetic Nanoparticles

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We are developing synthetic methods to prepare and organize functional, polymer coated ferromagnetic nanoparticles as building blocks for mesoscale assembly. Here, we demonstrate that 1-D carbon nanoparticle chains and wires can be prepared by the assembly and pyrolysis polyacrylonitrile coated ferromagnetic nanoparticles.



Polymer Synthesis
Nanoparticle Synthesis
On multi-gram scales



Nanoparticle Functionalization

Magnetic Assembly

1-D Carbon Nanoparticle Chains