Objective:
• Design semiconducting nanowires as interconnects in a new generation of nanoelectronics
• Assist NSEC co-PI Glen Miller in synthesizing nanowires with specific semiconducting properties

Approach:
• Ab initio quantum chemical calculations yield equilibrium atomic positions and determine if nanowires are metallic or semiconducting

Significant Results:
• Suitable candidate nanowires have been identified, consisting of cyclacene molecules connected by linker molecules
• Tunable semiconducting properties can be achieved by using tetrazine molecules as linkers
  