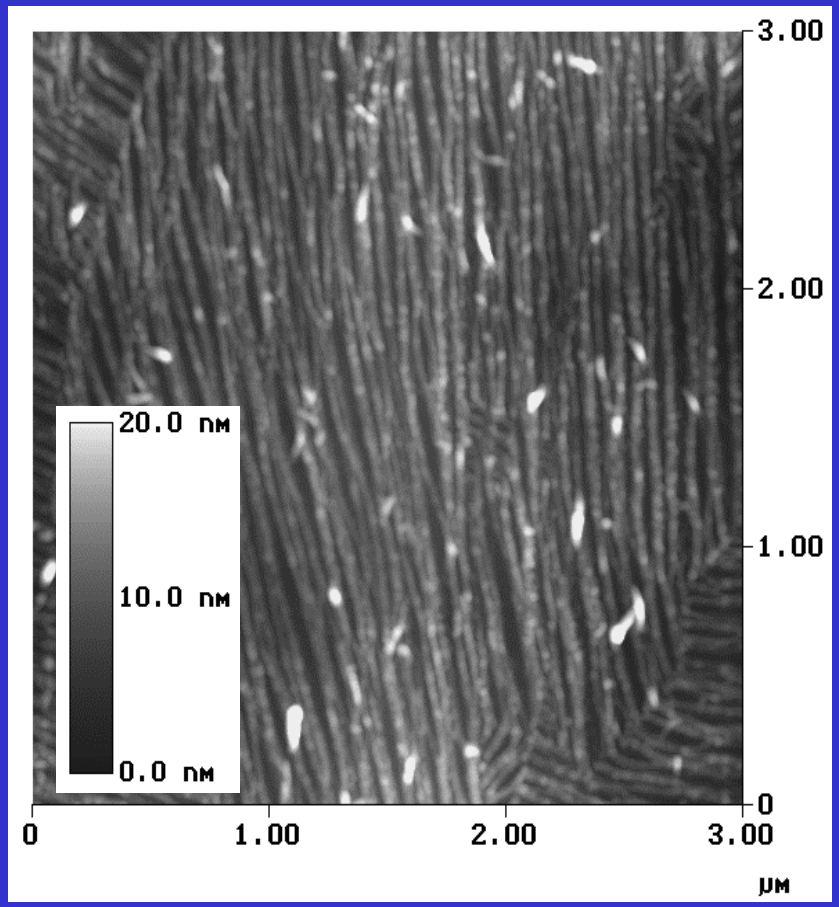
Atomic Force Microscopy Image
Polyaniline Synthesize on Graphite
Diameter of wires: 40.9 ± 4.1 nm



- Use adsorbed surfactant layers on graphite as templates for synthesis of polyaniline nanowires
- Highly doped form of polyaniline
- Morphology of surfactant (cylindrical) is qualitatively transferred to morphology of polymer; some changes in dimension
- Can control diameter and height by reaction time
- Highly oriented and uniform morphology as image shows
- Length of wires set by grain boundaries of graphite
- Conductivity ?????

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Broader Activities

• Former undergraduate student, Aaron Lowe, supported by REU supplements to NSF grant began graduate school at the University of Wisconsin-Madison.

•During the fiscal year, have hired 2 new undergraduates, both members of the Multicultural Engineering Program.

•Reelected to the Technical Program Committee of the Engineering Properties and Structure Division of the Society of Plastics Engineers.

•Initiated one research contract with Halliburton Inc. and another one is currently under negotiation.

•Invited to write review article "The Use of X-ray Absorption Spectroscopy in the Study of Synthetic Polymers" which recently appeared in Microchemical Journal (71 (2002) 267-279.