PURE Learning Plan

By: Yonghuan David REN
Project Basic Information

- Professor -- Joseph W. LYDING
- Mentor -- Adrian RADOCEA
- Major Project Goal
  - Develop a Method for Parallel Scanning Tunneling Microscopy Tip Fabrication
Past Milestones

- Provision of Background Knowledge
- Lab Tour
- Chemical Lab Training
- Tip-Etching Training
Future Milestones

• Continued Tip-Etching Training
• TEM Training
• (Serial) Tip-Sharpening Training
• Design a Method for Parallel Tip Fabrication
• Material:
  – *Introduction to Scanning Tunneling Microscopy* by C. Julian Chen
  – *Atomically Precise Manufacturing: The Opportunity, Challenges, and Impact.*
Other Goals

- Develop Efficient & Reproducible Ways for Parallel Tip-Etching
- Develop Efficient Ways for Tip-Catching
- Develop Ways for Parallel Tip-Sharpening
- Find Substitute Materials for Tips
- Investigate Hard Coatings
Other Goals

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• Develop Efficient Ways for Tip-Catching
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