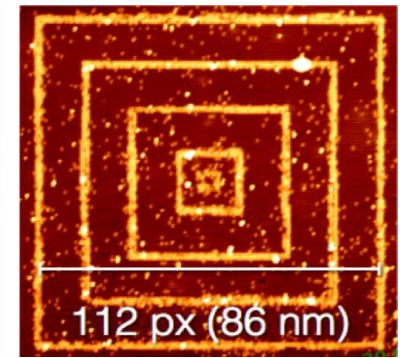
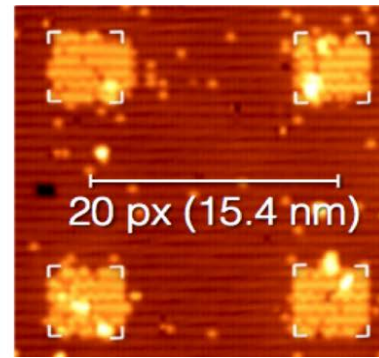
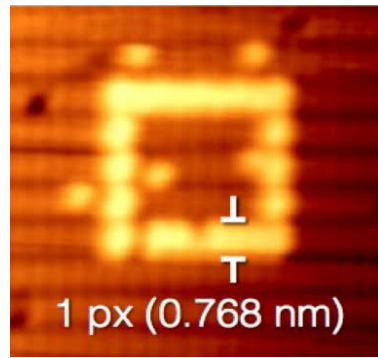




- Organization: Zyvex Labs
- PI: John N. Randall
- Possible Team Members
  - Purdue (Gerhard Klimeck and Rajib Rahman)
  - UNSW (Michelle Simmons)



- P in Si Qubit devices require near atomic precision fabrication.
- We believe that the physical Qubit devices will be more robust and better behaved allowing an easier path to Logical Qubits, if fabrication can be done with atomic, or even better, absolute precision.



- Since its inception, Zyvex Labs has been developing the STM based HDL that is required for accurate placement of P atoms in Si.
  - The evolution of e-beam litho to a digital process
  - Multi-mode exposures
  - Sub-nm pixels associated to Si lattice
  - Creep & hysteresis correction
  - Sub-nm resolution and CD control
  - Highly automated with a scripting language



- We are nanofabricators, not device physicist, theorists, nor do we have adequate device measurement capabilities. Further we are interested in an area that is too narrow for an award.
- We seek to join a larger program that can use our expertise to fabricate superior P in Si devices and to explore the sensitivities of device performance on fabrication precision.



# Contact Information

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