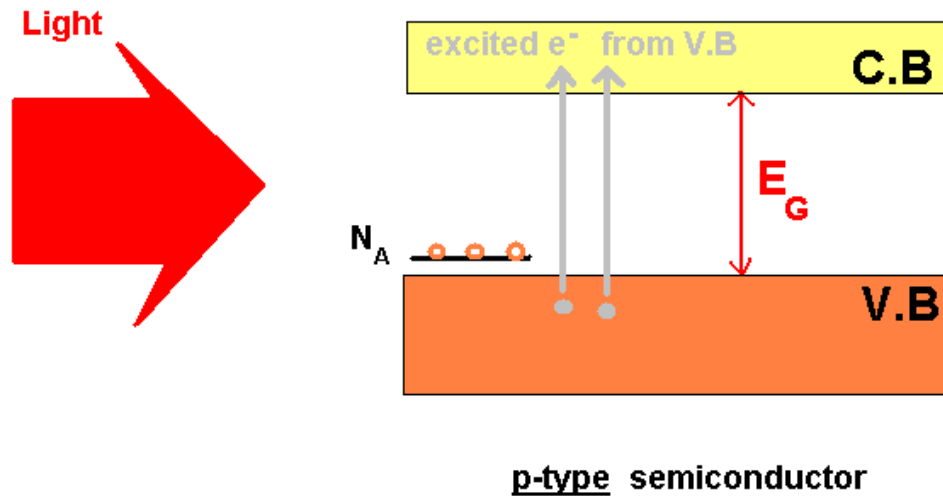
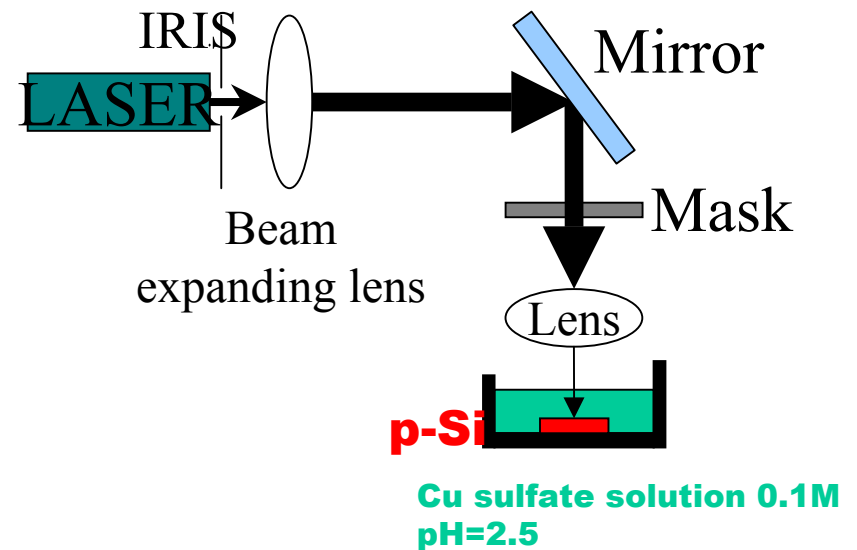


Photo-induced electrodeposition

Principle:

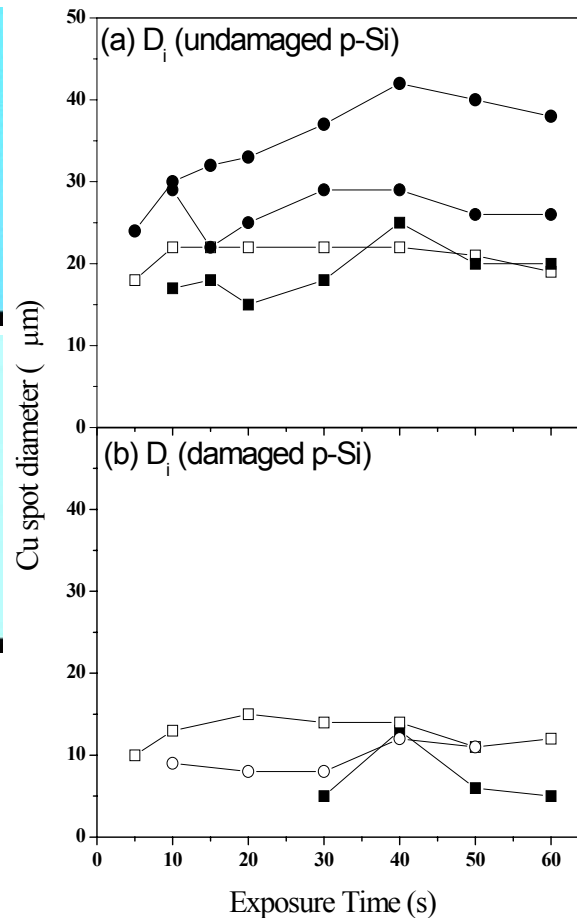
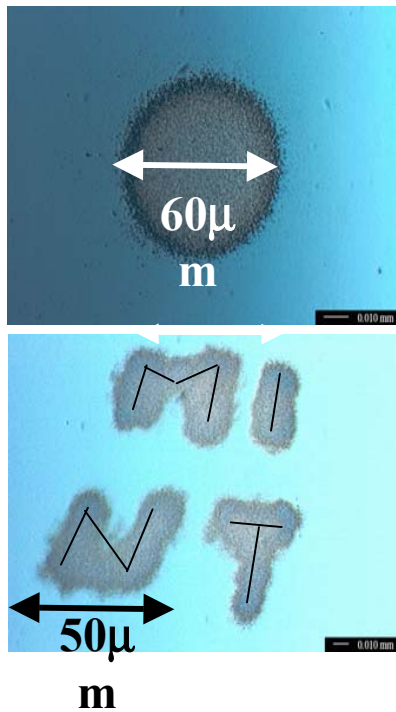


e⁻ are photo-excited from V.B to C.B and contribute to the conduction process



Electroless deposition of Cu occurs only where laser shines on p-Si. w/ or w/o the mirror.

Photo-induced electrodeposition



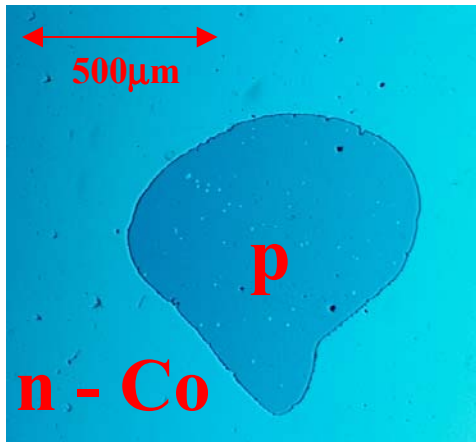
Structure size given by electron diffusion in the semiconductor

Structure size reduced by:

- shorter wavelength
- lower intensity
- e^- mfp and carrier lifetime in semiconductor

Electrodeposited Ni, Co, Fe on GaAs

Self-aligned patterning



direct lithography through:
local doping

