

Recent Funding (Sang Eon Han)



NSF CAREER Award (DMR-1555290)
“CAREER: Symmetry Control in Photonic Nanostructures for Enhanced Optical Properties”
\$500,000, 5 years



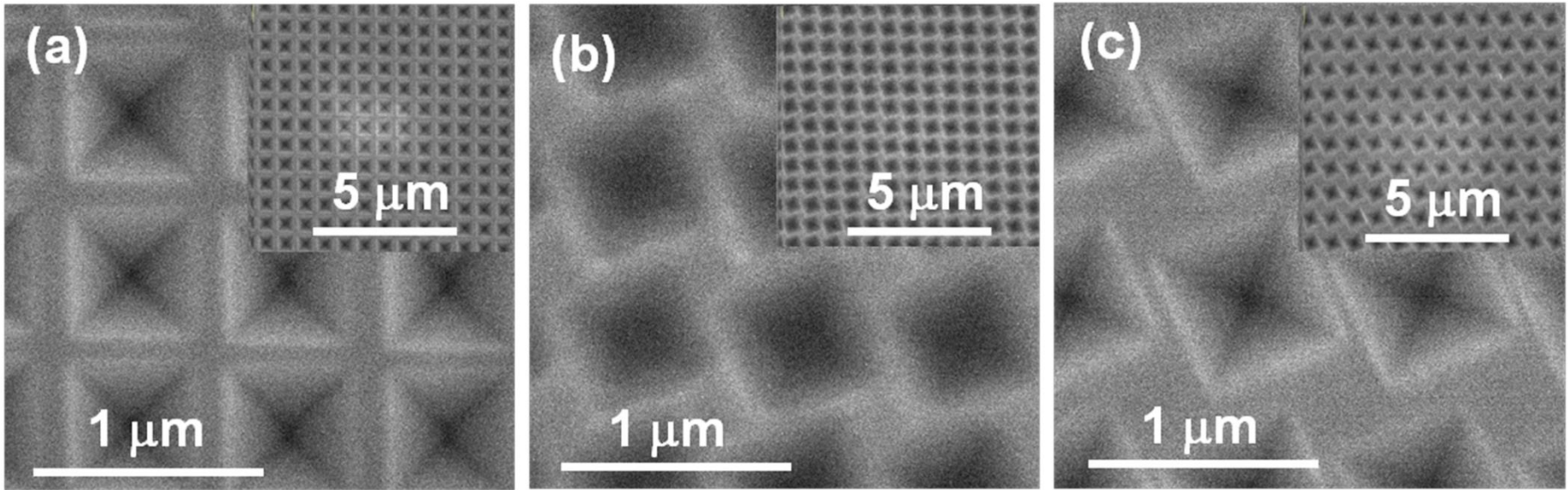
NSF Scalable Nanomanufacturing Program (CMMI-1635334)
“SNM: Scalable Surface Corrugation of Silicon Surfaces for Enhanced Light Trapping in Solar Cells”
with S.M. Han, S.R.J. Brueck, P.R. Schunk, N.V. Flor
\$950,000, 4 years



(PO CP0040209)
“Microsphere-Based Solar Independent Radiative Coolers”
with S.M. Han
\$164,000, 1 year

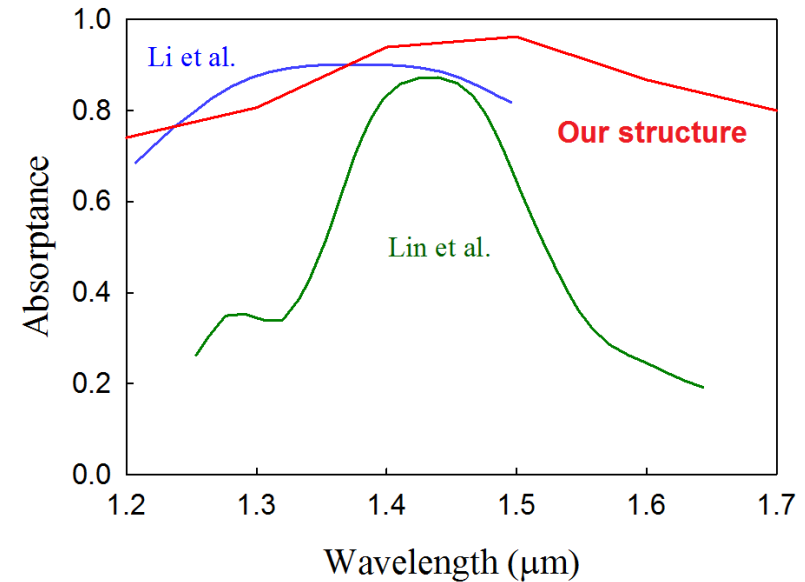


NSF CAREER Award

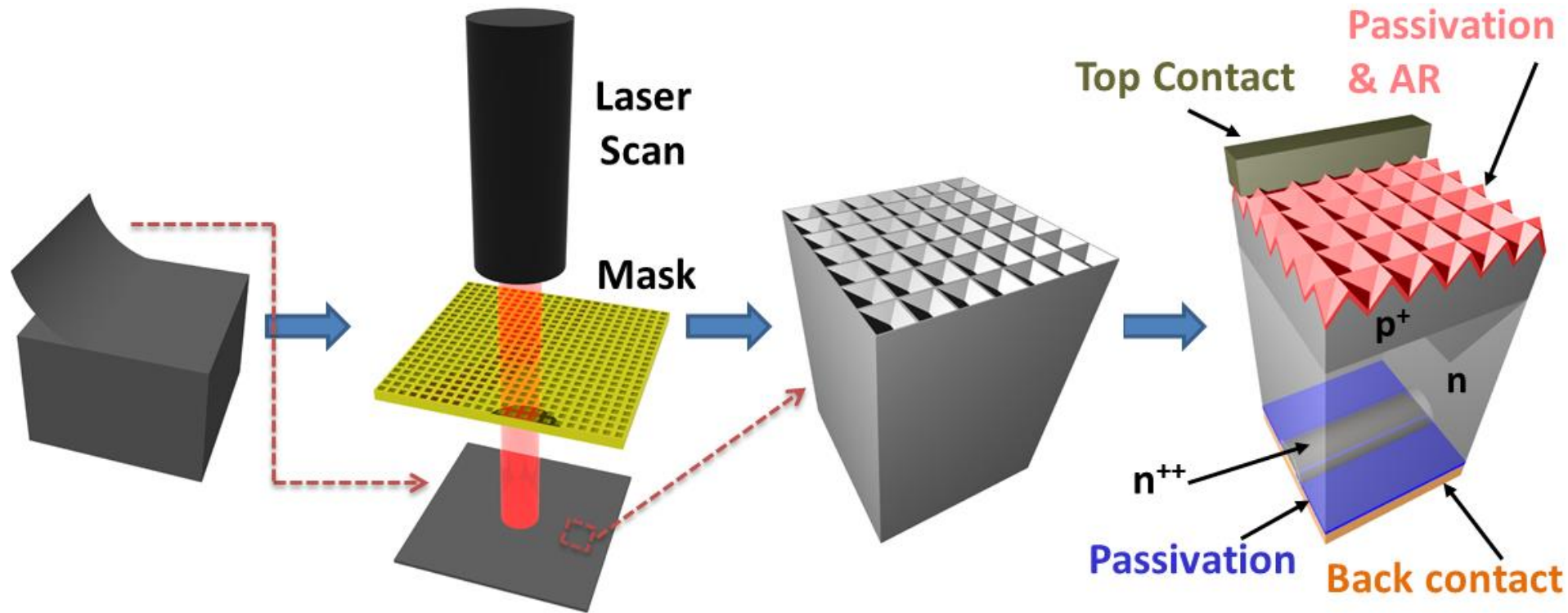


Symmetry-breaking nanostructures for

- Efficient solar photovoltaics
- Hot-electron-based photodetectors
- Biomimetic light-scattering materials



NSF Scalable Nanomanufacturing Program



Kerfless
Production of
20- μm -thick
c-Si films

Low-Cost
Scalable
Lithography

Wet etching
and
Surface
Passivation

Integration
to
Solar Cell

Brueck
S.E.Han follow-up

Experiment: Han &
Han
Theory: Schunk

Device Fab: Han &
Han
Visualization: Flor

AFRL grant (microsphere-based cooling coating)

