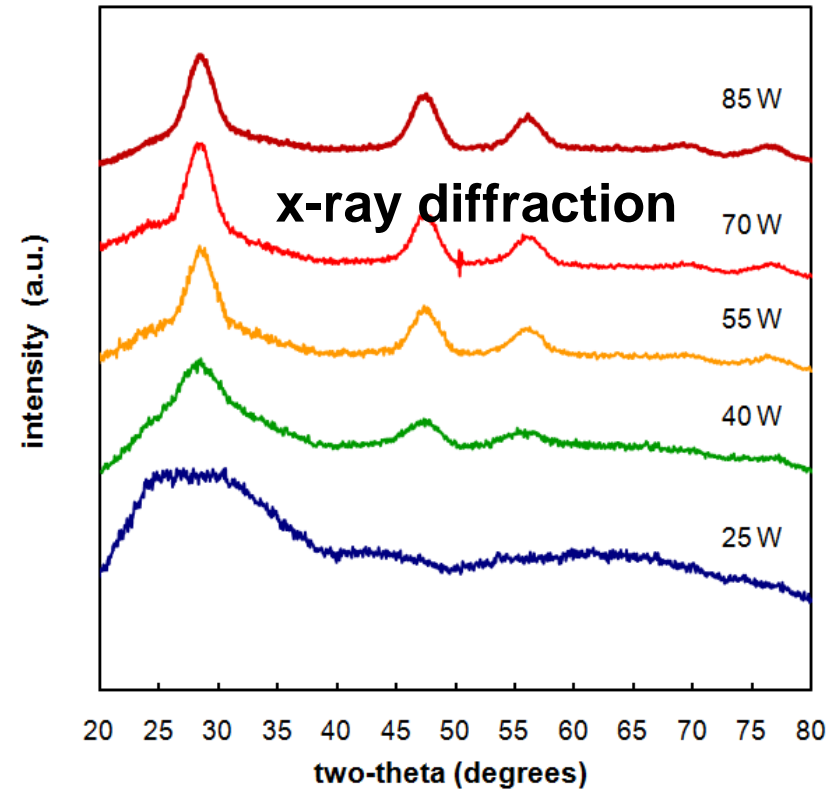
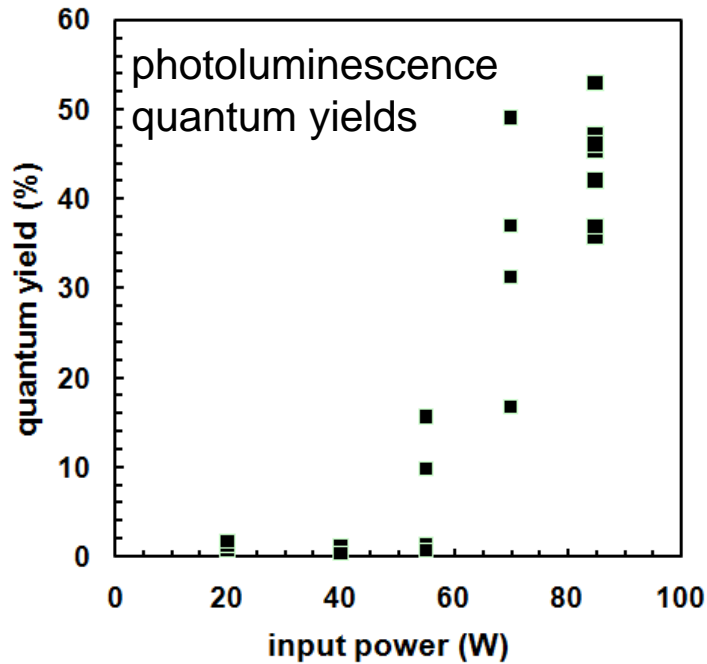


Photoluminescence from Amorphous and Crystalline Silicon Nanoparticles

Uwe Kortshagen (PI) & Rebecca Anthony

Mechanical Engineering, University of Minnesota

NNIN Facility utilized: Characterization Facility



We studied the photoluminescence (PL) and particle crystallinity of silicon nanoparticles as a function of the process input power to a nonthermal plasma reactor. Starting from 25 W, increasing synthesis power changes the particles from amorphous to crystalline. Only nanocrystalline samples exhibit efficient PL.



This work has been submitted for publication