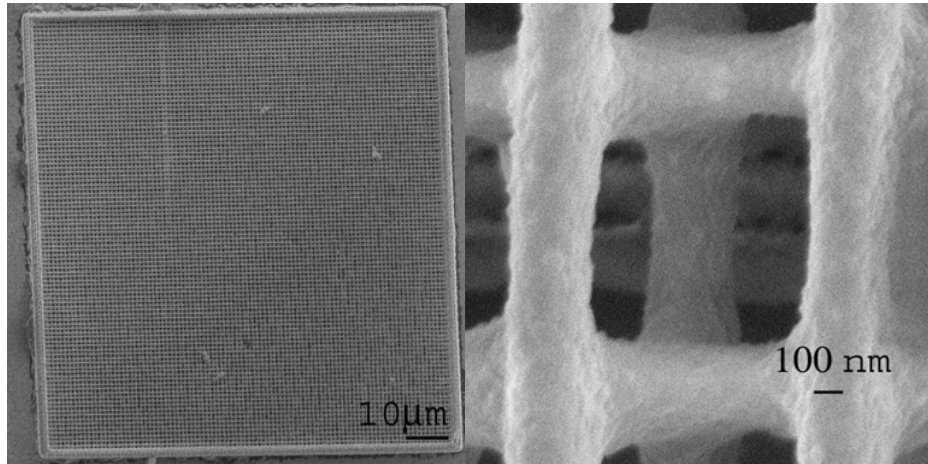
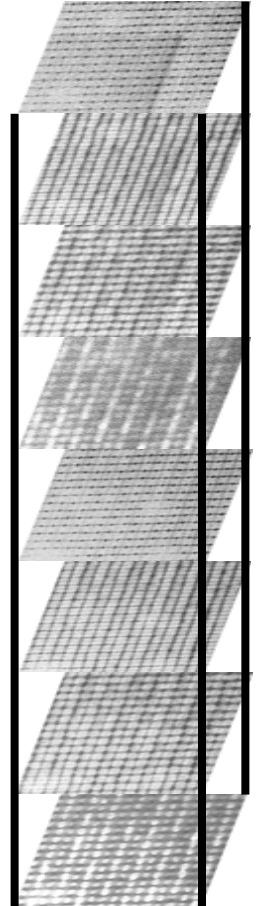
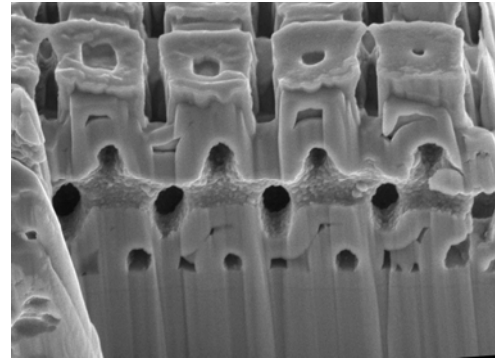


Fabrication of Photonic Crystals

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NNIN Facility utilized: Nanofabrication Center

- Photonic Crystals (PhCs) are periodically ordered dielectrics with a band gap for certain frequencies of light
- Our group synthesizes PhCs using
 - Self assembly of silica spheres
 - Direct Laser Writing in a photoresist



- ◆ Successful infiltrations have been demonstrated with LPCVD for silicon and metals
- ◆ FIB and Confocal Microscopy employed to study three dimensional fidelity

KEY OBSERVATIONS

- ◆ Defect free Photonic Bandgap structures have been demonstrated in thermally stable photoresist developed in our lab

Select Publications

- ◆ Norris *et al.*, **Adv. Mater.**, 20 (606), 2008
- ◆ Meng *et al.*, **Nano Lett.**, 6 (2249), 2006
- ◆ Han *et al.*, **PRL**, 99 (053906), 2007
- ◆ Jun *et al.*, **Adv. Mater.**, 17 (1908), 2005