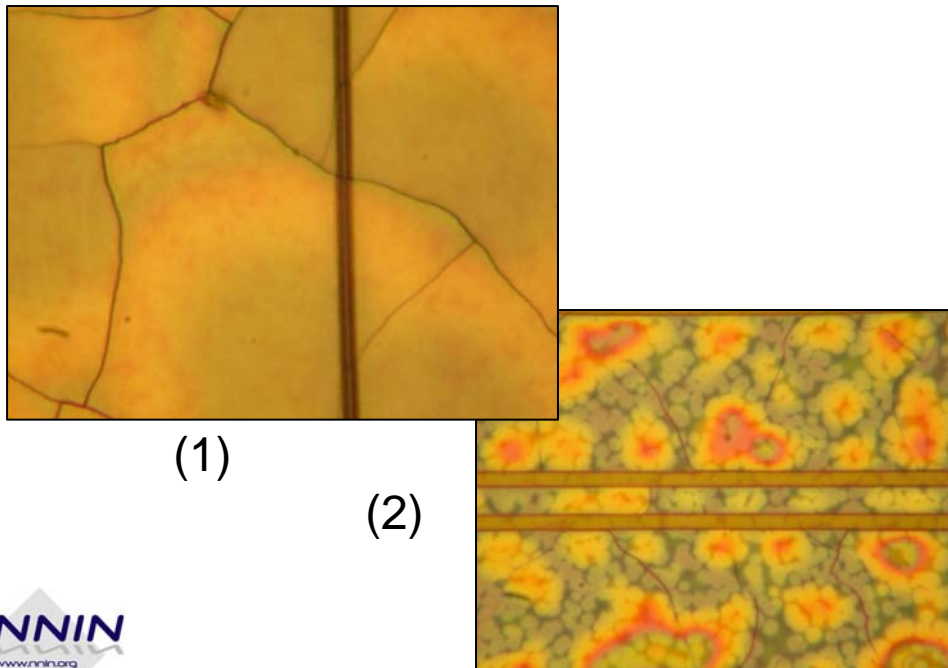


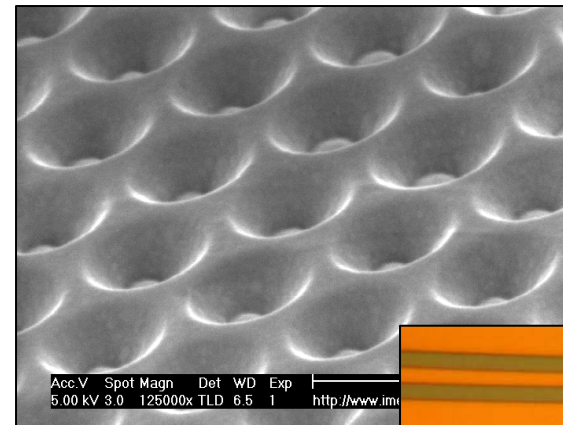
# Garnet-cladded Si-core Isolators and Photonic Crystals

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- Yttrium Iron Garnet (YIG) has been integrated onto SOI devices
  - ◆ Garnet is the best magneto-optical material with low loss
  - ◆ Garnet usually cracks when grown onto semiconductors (1)...
  - ◆ .. or incomplete crystallization (2)



- Proper processing can overcome integration challenges
  - ◆ Garnet coats inside and outside of SOI (Si-on-Insulator) photonic crystals (1)
  - ◆ Fully-crystallized garnet on waveguides without cracks. (2)



(1)

(2)

