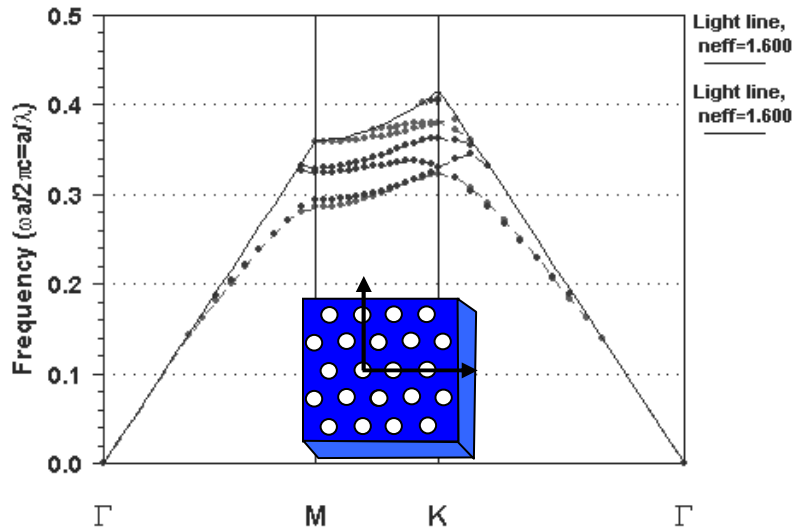


Nanostructures for Photonic Bandgap Devices using Garnet Films

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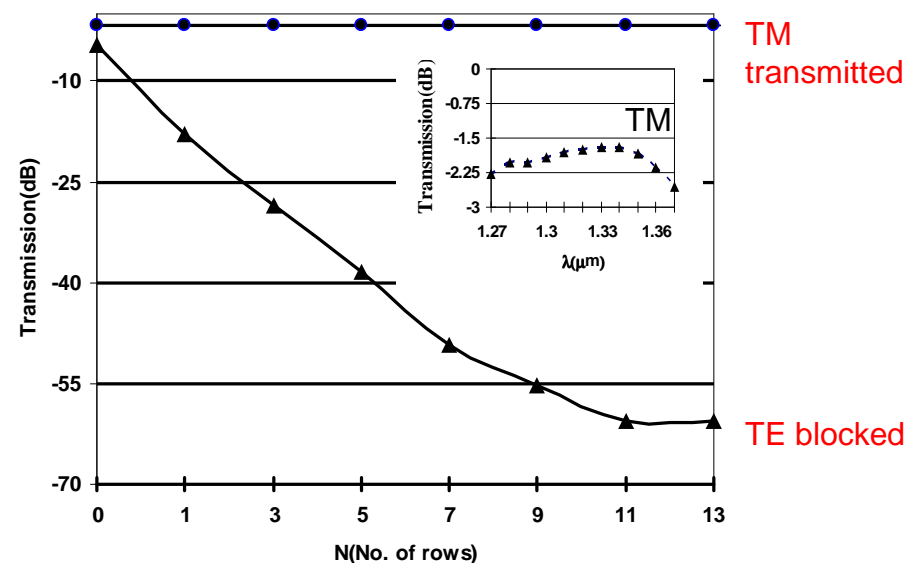
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- Motivation: Nanostructures in garnet allow photonic bandgaps
- Simulations allow design of devices
- RIE allows fabrication using self-assembled masks



Band structure of the TE-like (light circles) and TM-like (dark circles) modes of the 2D patterned photonic crystal slab (inset: air holes in garnet film).

- Results: Polarizers have been successfully designed.
- Both TE-blocking and TM-blocking polarizers have been designed and incorporated with Faraday rotator
- Nanostructured masks are made and etching is ongoing



Transmission loss vs. length of photonic crystal polarizer incorporated with Faraday rotator.