

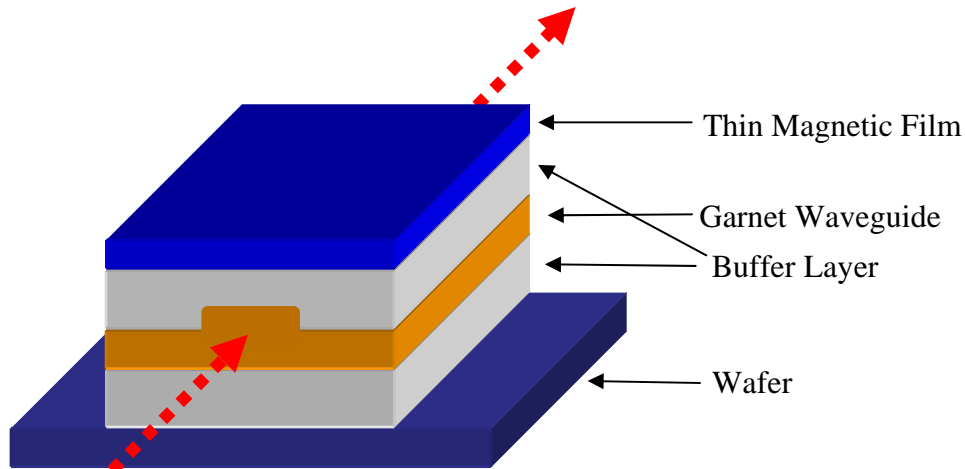
Garnet Waveguide Isolators

Xiaoyuan Qi and Beth Stadler

Electrical and Computer Engineering, University of Minnesota

- Motivation: Integrate Isolators with semiconductor devices.
 - Use photolithography and etching to fabricate waveguides.

- Wet Etching and Reactive Ion Etching (RIE).
 - Smooth edges required for low optical loss
 - RIE will also allow smaller features for future studies in magnetophotonic bandgaps (PBGs)



Schematic of the integrated garnet waveguide isolators. Light rotates 45deg each time it propagates through isolator so backward traveling light can be blocked.

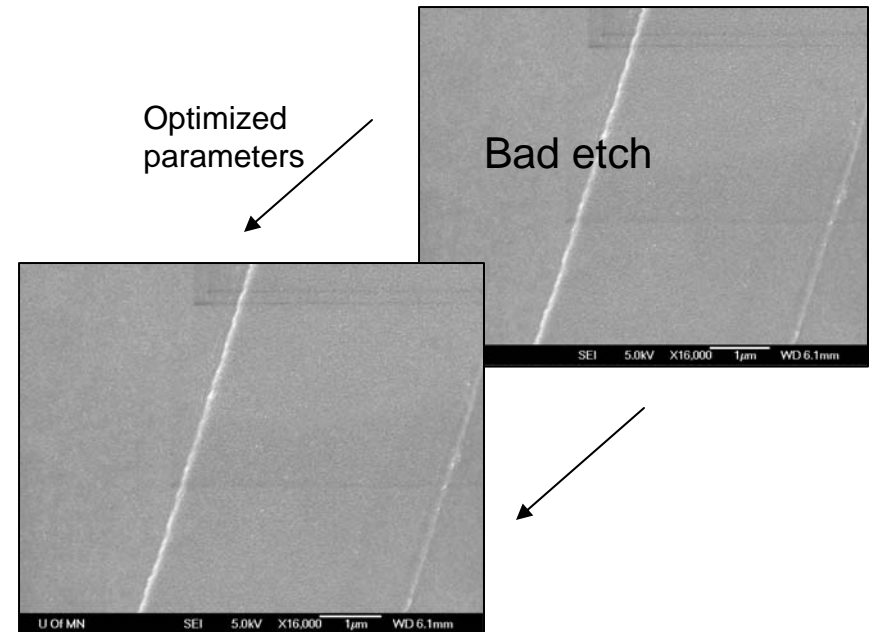


Photo shows smooth edge obtained by optimizing RIE parameters. **MINNESOTA**