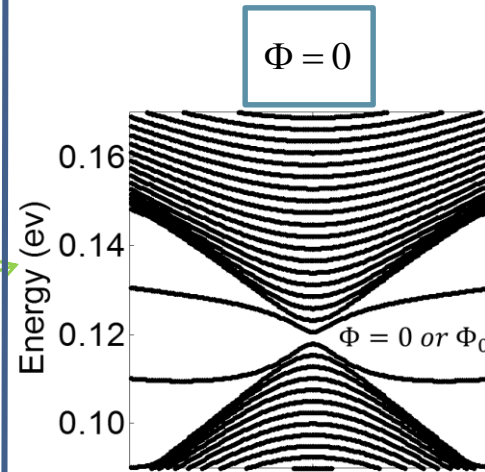
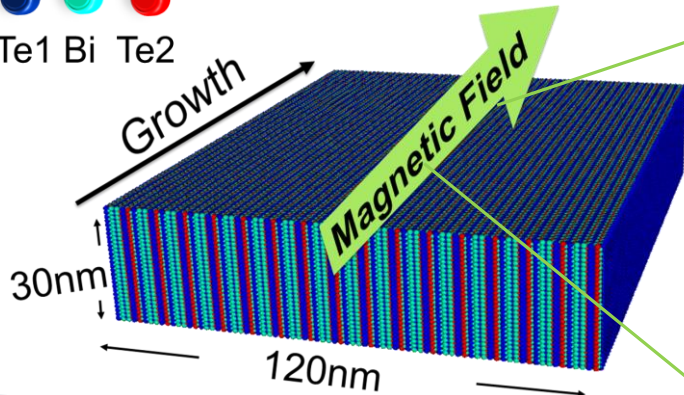


## Motivation:

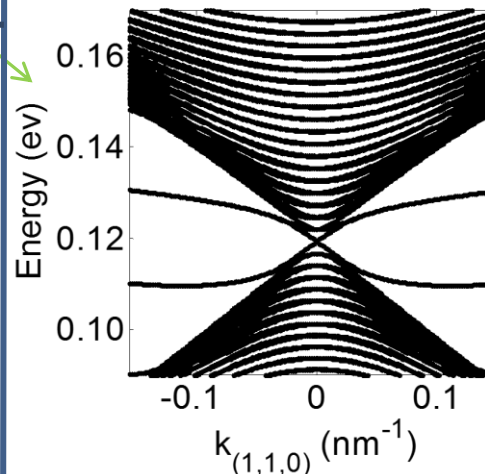
- Validate NEMO5 tight binding results for applied magnetic field.

Te1 Bi Te2

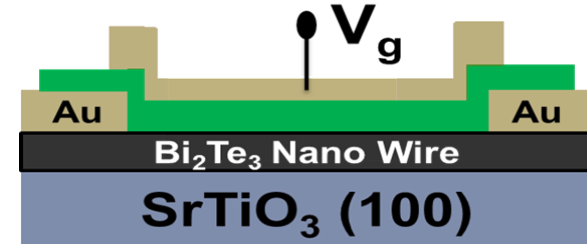


$$\Phi_0 = h/e$$

$$\Phi = \vec{B} \cdot \vec{S}$$

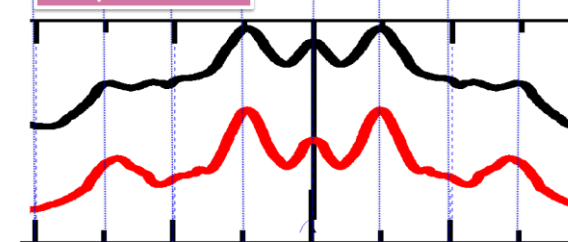


$$\Phi = \frac{\Phi_0}{2}$$

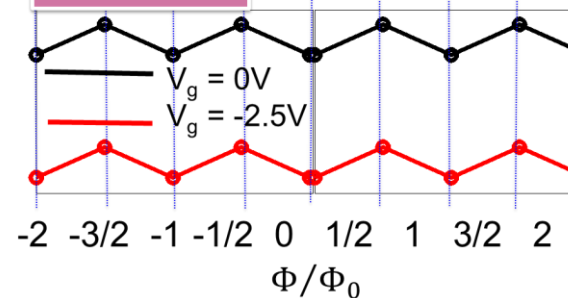


## Magneto-conductance

Experiment



Simulation



## Results / Impact:

1. Helical modes captured from NEMO5 bandstructure calculation.
2. Magneto-conductance from NEMO5 shows  $\pi$ -AB oscillations.