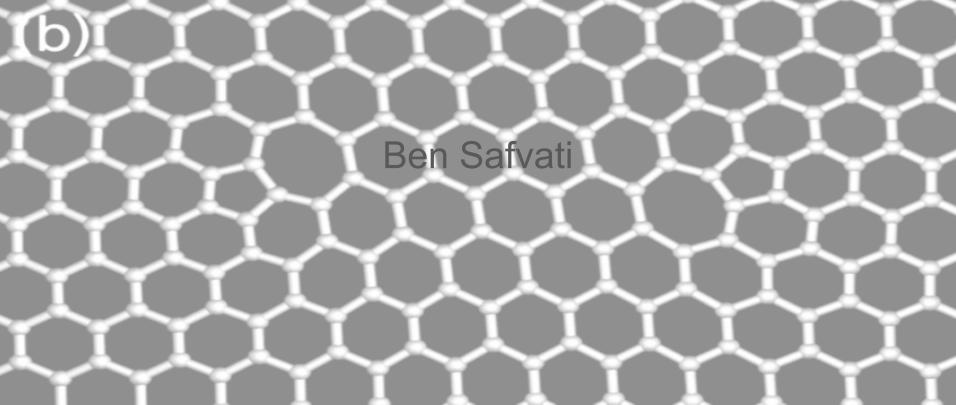
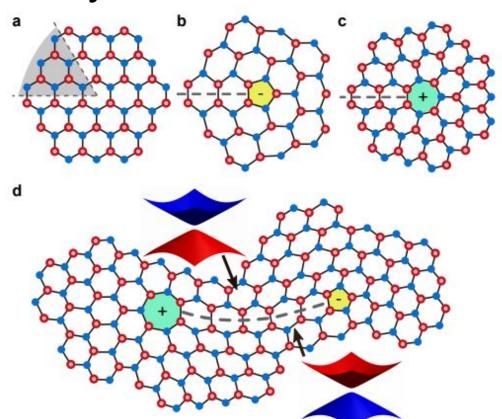
# Experimental discovery of bulk-disclination correspondence



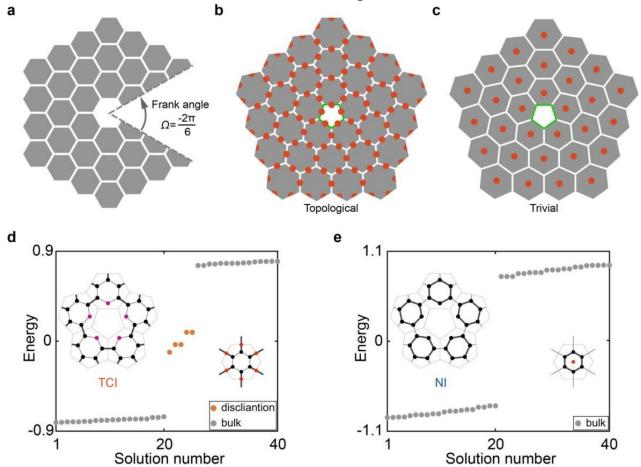
### Disclinations in the Honeycomb Lattice

 Topological defects with long-range effects on the lattice.

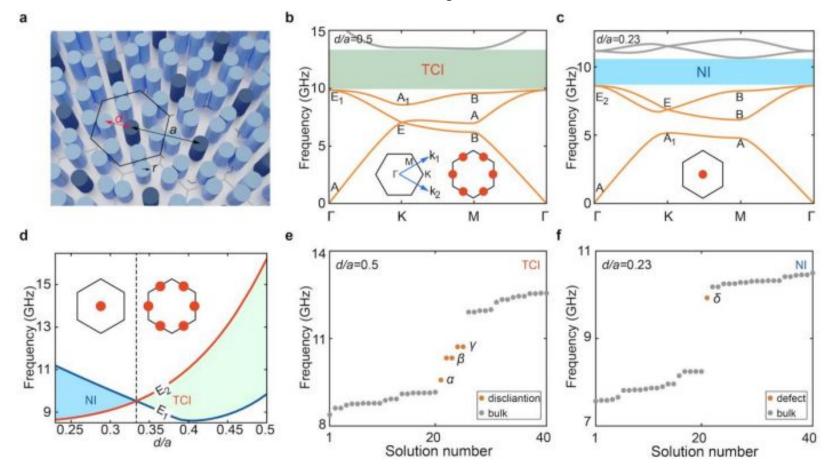
 Oppositely "charged" disclinations along a path form energetically stable defects.



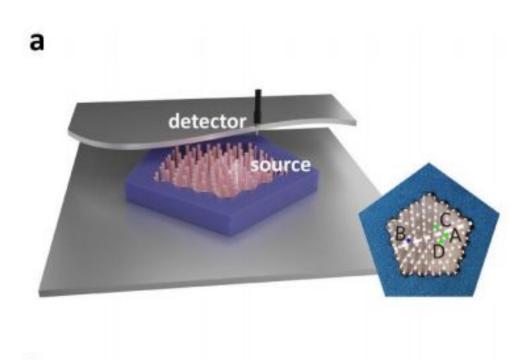
### Disclinations in the Honeycomb Lattice

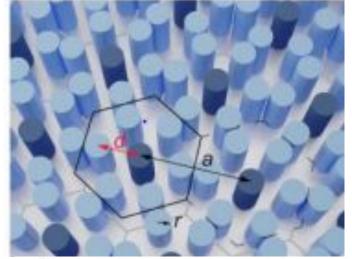


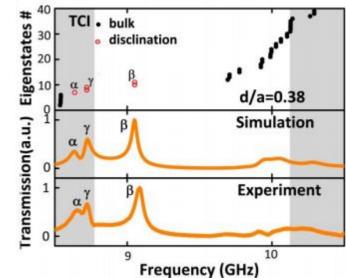
### Disclinations in the Honeycomb Lattice



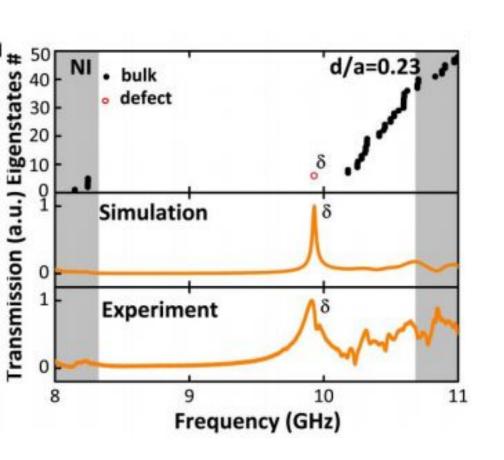
#### **Disclination Modes**

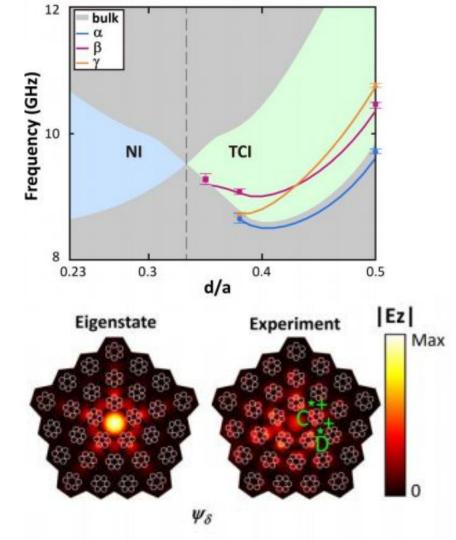




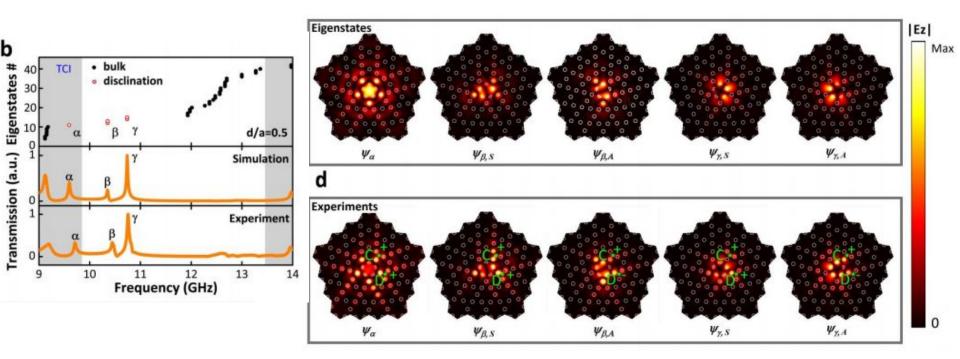


### Disclination Modes (NI)

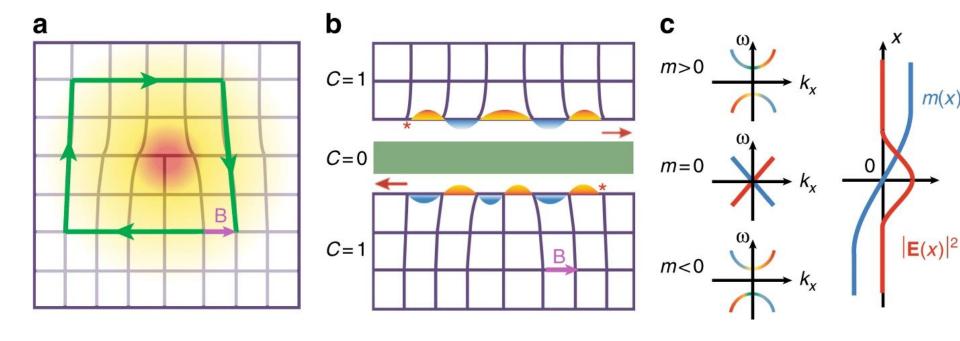




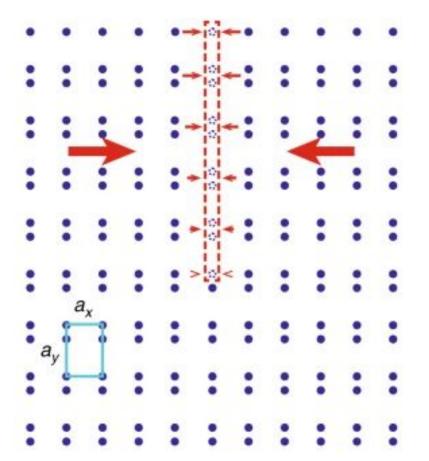
### Disclination Modes (TCI)

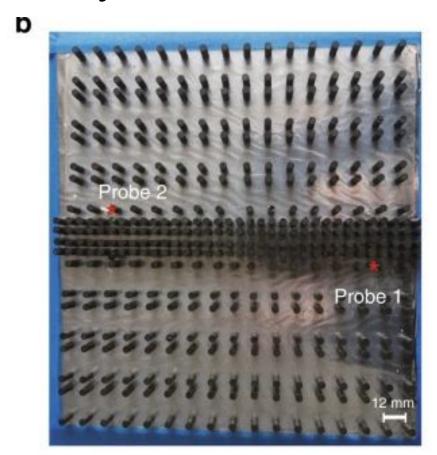


### Different Experiment: Topological Localization on a Dislocation in a Photonic Crystal

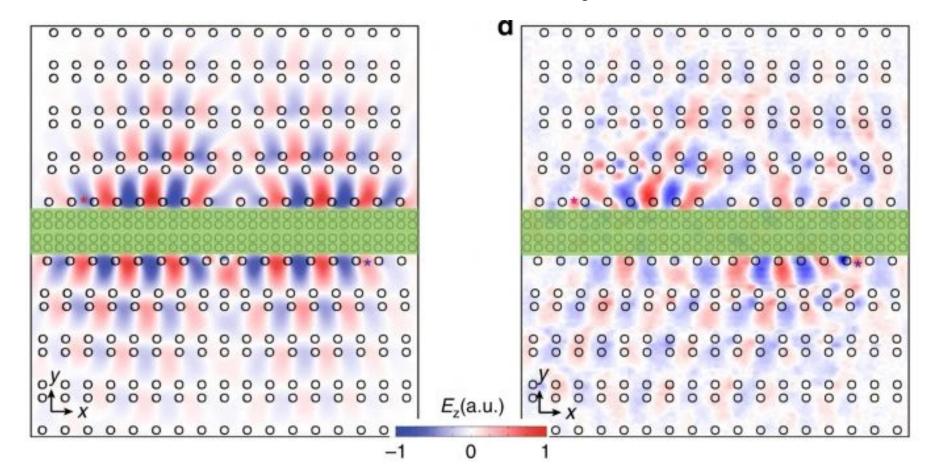


### Dislocations in a Photonic Crystal

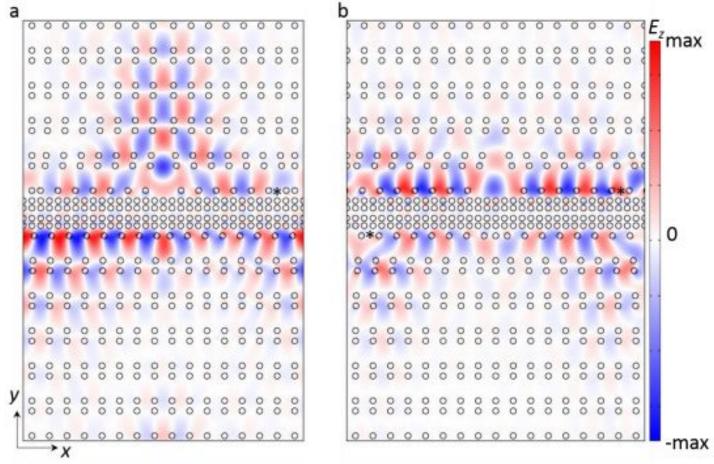




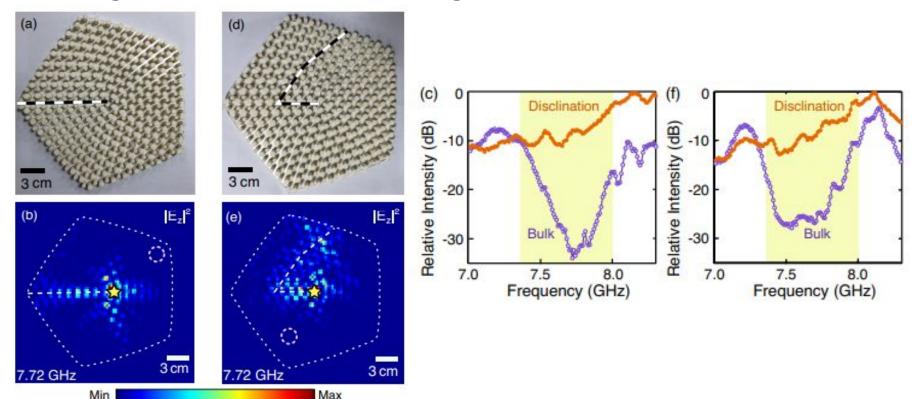
### Dislocations in a Photonic Crystal



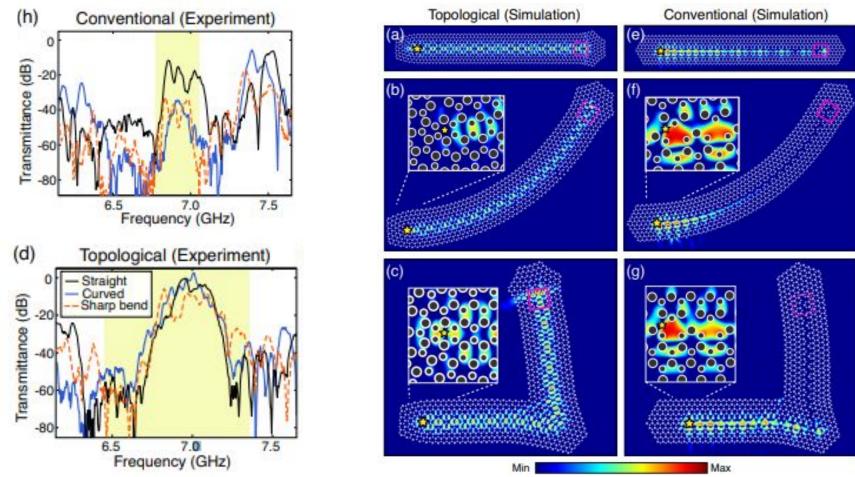
### Dislocations in a Photonic Crystal



## One More Experiment: Topological Photonic Waveguides out of Designer Dislocations



### Topological Photonic Waveguides



#### References:

- https://arxiv.org/ftp/arxiv/papers/2003/2003.08140.pdf
- https://www.nature.com/articles/s41467-018-04861-x
- https://journals.aps.org/prl/pdf/10.1103/PhysRevLett.124.243602