

# Isotropic 3D statistical topological insulator

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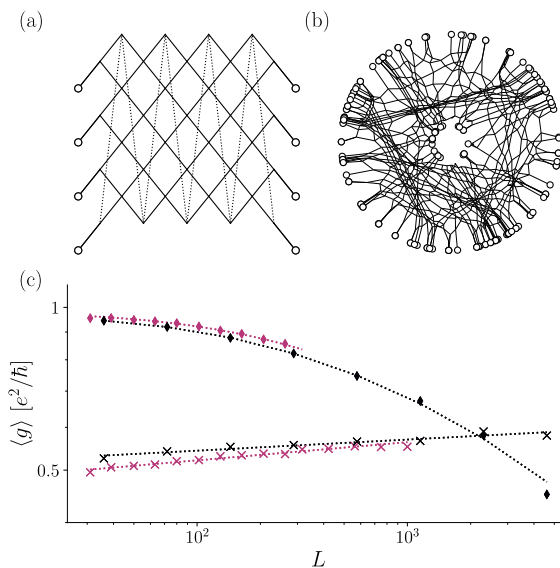
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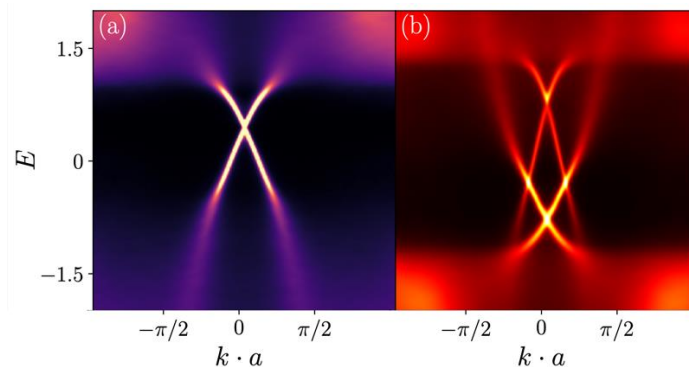
## Abstract

Inversion and time-reversal symmetry typically coexist in nature. However, this is not universally required to always be the case. We present a 3D Hamiltonian that systematically breaks time-reversal symmetry and receives topological protection solely from inversion and continuous rotation symmetry. We demonstrate topologically-protected transport using regular and amorphous network models. We show that the doubled transition is not protected from localization, but is still protected from gapping out, and a finite density of states persists on the surface while the bulk is insulating.

## Figures



**Figure 1:** (a)-(b) Regular and amorphous networks and (c) the conductance scaling for single (x markers) and double (diamond markers) transitions.



**Figure 2:** Spectral functions of the (a) single and (b) double transition.