

Abstract Submitted  
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**Surface state transport in Bi<sub>2</sub>Se<sub>3</sub> nanodevices** HADAR STEINBERG, VALLA FATEMI, PABLO JARILLO-HERRERO, MIT — We report on electronic transport measurements on thin (<100 nm) Bi<sub>2</sub>Se<sub>3</sub> devices and show that the density of the surface states can be modulated via the electric field effect by using a top-gate with a high-k dielectric insulator. The conductance dependence on geometry, gate voltage, and temperature all indicate that transport is governed by parallel surface and bulk contributions.

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