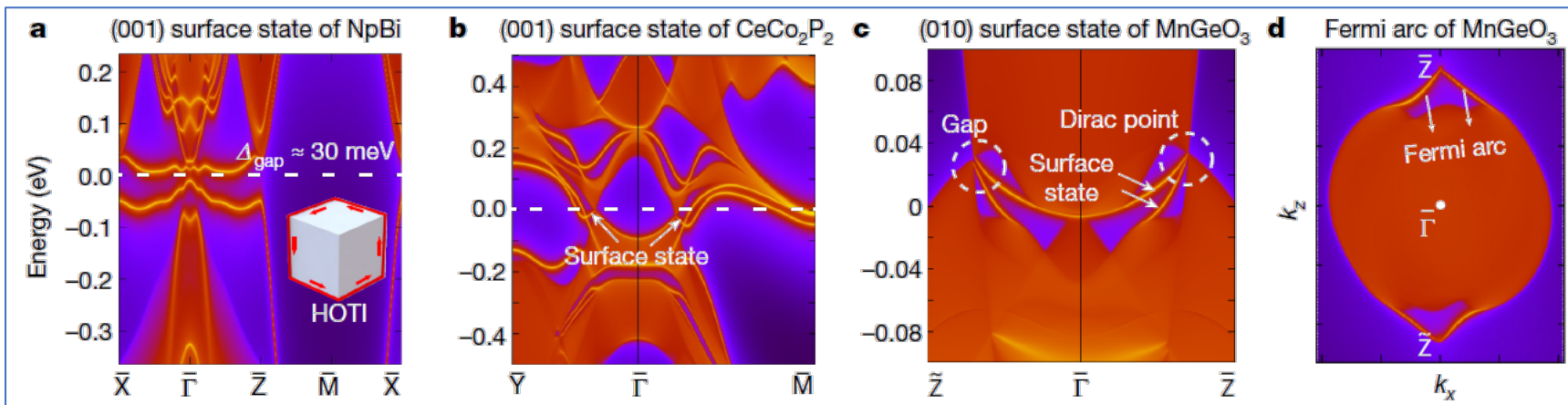


# Materials Research Science and Engineering Centers

## Magnetic Topological Materials from Magnetic Topological Quantum Chemistry

- Start with experimentally verified magnetic structures with a magnetic space group (MSG)
- Run magnetic topological quantum chemistry (MTQC) and magnetic symmetry-based indicators (Sis) on density functional theory (DFT)
- ~130 magnetic topological insulators and semimetals!



“High-throughput calculations of magnetic topological materials,” Y. Xu<sup>1</sup>, L. Elcoro<sup>2</sup>, Z.-D. Song<sup>3</sup>, B. J. Wieder<sup>3</sup>, M. G. Vergniory<sup>4</sup>, N. Regnault<sup>3,5</sup>, Y. Chen<sup>6</sup>, C. Felser<sup>7</sup>, B. A. Bernevig<sup>3</sup>, Nature **586** (2020).

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