Michael Freedman* (michaelf@microsoft.com), CNSI Bldg., Office 2245, University of California, Santa Barbara, CA 93106. K-theory in condensed matter physics.

I will review recent developments due to Kane, Kitaev, Ludwig, and others on the central role K-theory (ordinary, twisted, and controlled) in the understanding exotic phenomena associated with novel classes of insulators such as HgTe. (Received September 16, 2009)