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Demonstration of a D-metal from a chiral spin liquid[1] VICTOR CHUA, GREGORY FIETE, University of Texas at Austin — We report recent results on a study of a 2D disordered but exactly solvable gapless chiral spin-liquid ground state whose fractionalised quasiparticle excitations are Majorana fermions and are classified as being in the D-class of the Altland-Zirnbauer 10-fold classification scheme [Phys. Rev. B 55, 1142 (1997)]. Transport and quasiparticle localisation properties of this Majorana metal in nanowire configurations are studied and contrasted with the previously predicted D-metal phase of Senthil and Fisher [Phys. Rev. B 61, 9690 (2000)]. The role of Z2 vortices play towards transport properties are also discussed.

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