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Growth and properties of half-Heusler DyPdBi[1] BRIAN MULCAHY, MAO ZHENG, CAROLYN KAN, JAMES ECKSTEIN, University of Illinois Urbana-Champaign — Some half-Heusler phases have been predicted by Chadov, *et al*, to exhibit topological electronic structure. In addition to providing an exciting new topological system, the breadth of the elemental parameter space for this system opens the door for investigation of the interplay between many novel physical states with the topological system. We have grown thin films of one of these phases, the cubic half-Heusler material DyPdBi, using carefully flux matched molecular beam epitaxy. Crystalline quality was monitored via *in situ* RHEED and verified by *ex situ* x-ray diffraction measurements. Transport measurements indicate the emergence of interesting correlated behavior at low temperature.

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