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Single crystal growth and characterization of Na_3Bi and Bi_2Te_2Se topological materials[1] SATYA K. KUSHWAHA, JASON W. KRIZAN, R.J. CAVA, Princeton University — In recent years, the discoveries of topological insulators (TI) and three-dimensional (3D) Dirac semimetals (TDS) have been of significant interest in condensed matter science. To study these materials experimentally, it is of great importance to grow them in the form of high quality single crystals. Na_3Bi is recently discovered TDS and $Bi_2Te_2Se_3$ (BTS) is one of the interesting TI materials. Na_3Bi is extremely air sensitive and shows nontrivial crystallization behavior. BTS crystals usually grow with various point defects and typically exhibit metallic behavior. Here we will report the crystal growth of high quality Na_3Bi and insulating BTS single crystals. The characterization of their electronic properties by our collaborators in physics at Princeton and Brookhaven National Laboratory will be briefly described.

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