

Abstract Submitted
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Synthesis and Characterization of Multilayer $\text{Bi}(1.6)\text{Pb}(0.4)\text{Sr}(1.85)\text{Ca}(n)\text{Cu}(2n+1)\text{O}(x)$ DER-RICK MCRAE, NATHANIEL ROBINSON, JAFAR AMIRZADEH, Morris College, Sumter, SC, MING YIN, Benedict College, Columbia, SC, TIMIR DATTA, University of South Carolina, Columbia, SC — A modified solid-state reaction is used to synthesized multi-layer bismuth high Tc superconductor $\text{Bi}(1.6)\text{Pb}(0.4)\text{Sr}(1.85)\text{Ca}(n)\text{Cu}(2n+1)\text{O}(x)$. The number of Ca layers ranged from $n=2$ to $n=9$. The resulting ceramic materials were investigated by electron microscopy (SEM) and EDAX. Samples were tested for superconducting transitions. Transport properties were characterized with four-probe method. Influence of synthesis on the temperature dependant behavior of electrical conductivity and superconductivity will be reported.

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