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Synthesis and Charateriztion of BSCCO System Doped with Ru, Nb and Ho FOUZI ARAMMASH, Benedict College, BRETT MCCARTY, University of South Carolina, RUSLAN PROZOROV, University of South Carolina — Samples of $Bi_2Sr_2CaCu_{2-x}$ A_xO_8 with A=Ru, Nb, Ho and X=0.0, 0.10, 0.15, 0.2 were synthesized using ammonium nitrate melt method. Appropriate amounts of Bi_2O_3, $SrCO_3$, and the oxides of the doping elements, etc were mixed together. A small amount of ammonium nitrate was added to the mixture and reground thoroughly using an agate mortar and a pestle. The resulted precursor then heated between 160-170C under hood. Further heating at 400-500 C resulted in the formation of dark colored powder. The powder was then pressed into small pellets and annealed at 950 C in flowing oxygen for 24 hours and then furnace cooled to room temperature. The samples were characterized by measuring their magnetic as well as superconducting properties which will be presented.

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