Abstract Submitted
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**Bi3-xM3O11+? (M=Cr, Rh, Ir, Pt, Pd): A series of new KSbO3-type structural magnetic materials** WEI YI, National Institute for Materials Science — KSbO3-type family is interesting because it can adopt three interpenetrating networks with the composition changing from ABO3 (KSbO3 and KIrO3) to ABO3.667 (Bi3Ru3O11, La3Ru3O11, and Bi3GaSb2O11). Recently Belik et. al reported a new KSbO3-type random ferrimagnet Bi3Mn3O11 with high Tc. Here we reported a series of new KSbO3-type structural materials Bi3-xM3O11+? (M=Cr, Rh, Ir, Pt, Pd) synthesized by high pressure and high temperature (HPHT). We investigated the effects of oxygen content on the structural, physical, and chemical properties of these materials, because a wide variation of ? value (changed from -0.5 to 0.6) in this system keeps the same cubic structure. In addition, we also studied the effects of Bi content on the structure, physical, and chemical properties. The value of x was changed from 0 to 0.4 in Bi3-xCr3O11+?.

Wei Yi
National Institute for Materials Science

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