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Structure and Properties of Hexagonal $\mathbf{R_xMnO_{3+d}}$[1] TREVOR TYSON, TIAN YU, Department of Physics, New Jersey Institute of Technology, Newark, NJ 07102, CATHERINE DUBOURDIEU, INL, CNRS - Ecole Centrale de Lyon, Ecole Centrale de Lyon, 36 ave Guy de Collongue, 69134 Ecully — Films of hexagonal Multiferroic RxMnO3+d (R=Dy and Er) have been prepared. Local atomic and electronic structure measurements have been utilized to probe the variation of properties of samples. The defect levels obtained, x $\sim$ 0.6 to x $\sim$ 1.2, correspond to systems with defect (voids) on the R sites and then the Mn sites. The spectroscopic studies are complemented by electronic structure calculations to predict the magnetic and electrical polarization properties as a function of defect level

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