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**Electronic, Magnetic and Thermal Properties of Electron Doped  $\text{YMnO}_3$** <sup>1</sup> TIAN YU, PENG GAO, TREVOR A. TYSON, New Jersey Institute of Technology — The thermal, magnetic and electronic properties of the electron doped  $\text{Y}_{1-x}\text{Zr}_x\text{MnO}_3$  system were measured at both low and high temperatures. Correlations are made with structural studies on multiple length scales. Raman and IR measurements were performed at room temperature to track the changes in the phonons with doping. The effect of doping on the ferroelectric transition is examined. This work is supported by DOE Grant DE-FG02-07ER46402.

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Tian Yu  
New Jersey Institute of Technology

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