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Field Modulated Intrinsic Positive Exchange Bias in Novel Ferrite $Ru_{0.25}Cr_{0.75}O_2$ near the Compensation Point KEVIN G. WEST, NAM DAO, University of Virginia, JIWEI LU, STUART A. WOLF — In some ferrimagnetic materials systems a compensation point is observed where the opposing sublattice magnetizations are equal and opposite resulting in a zero net magnetization. The resulting magnetization decreases below zero at temperatures below T_c and then increase to zero at T_c. We observe this type of unusual ferrimagnetic behavior in the $Ru_{0.25}Cr_{0.75}O_2$ system. In addition, near the compensation point we observe positive exchange bias that can be modulated using an external applied magnetic field. Possible mechanisms will be discussed.

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