Title:	Evolution of magnetic, transport, and thermal properties in Na4-xIr3 O
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Abstract:	The hyperkagome material Na4Ir3O8 is a three-dimensional spin-liquid candidate proximate to a quantum critical point (QCP). We present a comprehensive study of the structure, magnetic susceptibility χ, heat capacity C, and electrical transport (ρ(T)) on polycrystalline samples of the doped hyperkagome material Na4-xIr3O8 (x≈0,0.1,0.3,0.7). Materials with x≤0.3 are found to be Mott insulators with strong antiferromagnetic interactions and no magnetic ordering down to T=2 K. All samples show irreversibility below T≈6 K between the zero-field-cooled and field-cooled magnetization measured in low fields (H=0.050 T) suggesting a frozen low temperature state although no corresponding anomaly is seen in the heat capacity. The x=0.7 sample shows ρ(T) which weakly increases with decreasing temperature T, nearly T independent χ, a linear in T contribution to the low temperature C, and a Wilson ratio RW≈7 suggesting anomalous semimetallic behavior.
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