Title:	Investigation Of Magnetic Ground State of Cu 2 IrO 3
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Abstract:	There are conflicting reports in the literature regarding the magnetic ground state of the frustrated Kitaev material Cu 2 IrO 3 . While one group reported spin-glass (SG) features in susceptibility measurements [1] , another group showed an absence of SG and only spin liquid behavior [2] . In this thesis we aim to understand the in- fluence of synthesis conditions on the magnetic ground state of Cu 2 IrO 3 with the eventual aim to be able to establish a recipe for synthesizing Cu 2 IrO 3 hosting the quantum spin liquid state. Towards this goal, we have synthesized polycrystalline samples of Cu 2 IrO 3 with different synthesis conditions and studied their structural and magnetic properties. We also synthesized the non-magnetic isostructural ma- terial Cu[Li 1/3 Sn 1/3]O 2 with an aim to extract the magnetic contribution to the heat capacity of Cu 2 IrO 3 and to check for it's proximity to Kitaev's QSL.
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