

Abstract Submitted
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Fabrication of Thin Film Copper Selenate by PLD and Solid State Reaction¹ DAVID KING, JINKE TANG, University of Wyoming, Department of Physics and Astronomy, JOHN ACKERMAN, University of Wyoming, Department of Chemical Engineering — Cu_2OSeO_3 is a ferrimagnetic insulator with broken inversion symmetry. It is also a cubic helimagnet that hosts a magnetic skyrmion lattice, which makes it a potential material for spintronic applications. Previous research on Cu_2OSeO_3 has used single crystals and even investigations of thin layers of Cu_2OSeO_3 were done by milling down bulk single crystals. The skyrmion lattice phase is typically more stable in thin films than in the bulk. Additionally, thin films are more suitable for device applications. We have successfully fabricated actual thin film Cu_2OSeO_3 . Here, we present results of using pulsed laser deposition (PLD) and subsequent solid state reactions to fabricate thin films of Cu_2OSeO_3 . Data showing the film's crystallography and magnetic properties are presented.

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