

Abstract Submitted
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FMR at High Temperature SIDNEY KATZ, DANIEL RICHARDSON, MINGZHONG WU, Colorado State Univ, COLORADO STATE UNIVERSITY TEAM — We take Ferromagnetic Resonance (FMR) Measurements and study thin films. I work with the high temperature system studying the effects of HAMR media samples at high temperature. The HAMR media sample we are testing is iron platinum. The iron platinum is on glass substrate and is only 10nm thick. Some of the samples will have a soft magnetic layer deposited on top of FePt layer, which is around 2-4nm thick. The soft layers deposited on the FePt are iron cobalt alloys. To know the data is accurate with the high temperature system we test it with Yttrium Iron Garnet (YIG). YIG has very low damping, thus power absorption is higher. Also, the properties of YIG have been studied before at high temperature many times before. The purpose of this research is data storage. The closer these grains get to each other the data storage increases and the more likely the exchange field from one of the grains will flip the other. The purpose of this study is to know the damping of the grain at high temperature, so hardware developers know how the damping changes with temperature so that the optimum temperature for hard drive performance can be selected.

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