

Abstract Submitted
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Affecting the magnetochemistry of cobalt/gold thin films with organic solvents FIONA SENTA OBERBECK-OXSHER, JAMES ADAM FISHER, RAHMAN MOHTASEBZADEH, BRETT ALTSCHUL, THOMAS CRAWFORD, SCOTT CRITTENDEN, University of South Carolina — We show the ability to measure the influence of a number of organic solvents on the magnetic properties of cobalt and cobalt-gold thin films by employing a custom, lithographically patterned planar Hall effect sensor. The magnitude of the observed shift in maximal Hall voltage varies with solvent functional group, scaling with the expected degree of deprotonization. By developing a novel measurement system, we are able to perform all experiments under standard conditions and apply the solvent without moving the sample out of the instrument, which eliminates a significant amount of error compared to previous measurements.

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