

Abstract Submitted  
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**Development of a high-resolution AC susceptometer for materials magnetic property investigation** SEAN HEFFERNAN, NEIL BAUMANN, BRANWYN HOLMES, WILLIAM NELSON, CHRISTOPHER WECKERLY, GUOQING WU<sup>1</sup>, Physics Dept, University of West Florida, Pensacola, Florida, 32514 — The AC magnetic susceptibility is an important probe for characterizing magnetic properties of many materials. In this effort, an innovative high-resolution AC susceptometer is constructed. It provides us a capability to conduct state-of-the art experiments in AC magnetometry for important physics such as that of colossal magnetoresistance, superconductivity, charge/spin density wave and phase transitions occurring in novel condensed matter materials, and satisfies the needs of students' research training and education in experimental sciences.

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