Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

High isostatic pressure synthesis of sonochemically modified MgB2 superconductor[1] BRETT MCCARTY, JOSUA HUGEN, DANIEL STOECKLEIN, RUSLAN PROZOROV, Iowa State University — A study of the effects of high intensity ultrasound on MgB2 precursors with different additives to improve pinning properties is reported. Additives were either co-sonicated with boron or mixed into sonicated boron afterwards. Hot isostatic pressure (HIP) was used to form fully dense MgB2 samples from precursors. Analysis of magnetization, microstructure and x-ray diffraction will be presented.

[1]Supported by the DOE-BES contract No. DE-AC02-07CH11358, NSF grant No. DMR 0603841 and Alfred P. Sloan Foundation

Brett McCarty
Iowa State University

Date submitted: 22 Nov 2007 Electronic form version 1.4