

Abstract Submitted
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Hot isostatic pressure synthesis of MgB₂ from sonochemically modified precursors¹ BRETT A. MCCARTY, AMANDA TOOMEY, RUSLAN PROZOROV, Ames Laboratory and Department of Physics & Astronomy, Iowa State University, Ames IA 50011 — Close to theoretical density bulk MgB₂ was obtained by hot isostatic pressing (HIP) from precursors subject to high-intensity ultrasonic treatment. Comparative results obtained on unmodified and sonicated boron of various purities (from 80% to 99%) and in combination with various phases of magnesium are reported. Samples made from sonicated precursors showed improvements in superconducting properties without affecting T_c. Analysis of magnetization, SEM images, and XRD will be presented.

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