

Abstract Submitted
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Development of Ag nanoparticle enhanced textured-powder Bi-2212/Ag wire JOSHUA KELLAMS, PETER MCINTYRE, Texas AM University, NATHANIEL POGUE, Paul Scherrer Institute, JACOB VANDERGRIFT, KYLE SHORES, Texas AM University — A new approach to the preparation of cores for Bi-2212/Ag wire is being developed. Nanoparticle Ag is homogeneously dispersed in Bi-2212 fine powder, and the mixture is uniaxially compressed to form highly textured, cold-sintered core rods. The rods are assembled in a silver matrix, drawn to form monofilament wire, and restacked and drawn to form multifilament wire. Preliminary studies using tablet geometry demonstrate that a non-melt heat treatment produces densification, grain growth, intergrowth among grains, and macroscopic current transport. The status of the development is reported.

Joshua Kellams
Texas A
M University

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