Contribution ID: **475** Type: **Poster Presentation**

The processing and superconducting properties of large scale single domain GdBCO bulk fabricated from graded solid phase source powders by the modified infiltration growth method

The top-seeded infiltration and growth process (TSIG) is very effective method for the preparation of REBCO bulk superconductors. In this paper, we investigate the effect of preparing GdBCO bulk superconductors by the modified TSIG process using spatially graded solid phase source precursor powder. The single domain GdBCO bulk were prepared with the graded solid phase which was pressed with a maximum composition of 3 wt% BaO doping in the solid phase powders in the vicinity of the seed, which decreased to 2 wt% and then 1 wt% towards the middle and the edge of the solid phase source pellet. The growth morphology, microstructure, and the superconducting properties of the GdBCO bulk had been investigated. It is found that the graded solid phase source pellet can be used to fabricate the large scale single domain GdBCO bulk successfully.

Author: Dr WANG, Miao (Shaanxi Normal University)

Co-authors: Dr LI, Jiawei (Shaanxi Normal University); Mr YANG, Pengtao (Shaanxi Normal University); Prof. YANG, Wanmin (Shaanxi Normal University); Mr FENG, Zhongling (Shaanxi Normal University)

Presenter: Dr WANG, Miao (Shaanxi Normal University)

Track Classification: CEC-06 - Superconducting Magnet Systems