## Effect of Containerless Melting and Solidification Process on HoAl2 and HoB2 Powders Using Electrode Induction Melting Gas Atomizer

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We have investigated the physical properties and atomization process of magnetic refrigerants such as HoAl2 and HoB2. Electrode induction melting gas atomization (EIGA) is a wildly applied method to prepare those spherical powders. The EIGA process achieves melting and atomization completely without the use of a crucible and influences the morphologies and properties of those powders. In HoAl2, we found a second phase of HoAl3 in the HoAl2 matrix, whose content is based on the quality of starting materials. In HoB2, we observed the morphologiy and internal microstructure that depended on the starting composition of the electrode of HoB2-x. This study provides those magnetocaloric properties and internal structures using the EIGA process. Powder sphericity and size distribution are also reported.