

Effects of partial pressures of various gases on the qualities of long coated conductors fabricated in vacuum

Byoungsu Lee, Hosup Kim, and Dojun Youm

Physics Department, Korea Advanced Institute of Science and Technology

305-701, Taejon, Korea

The effects of partial pressures of various gases on the qualities of coated conductors are studied, where the long samples were fabricated in a vacuum of a large physical vapour deposition system.

The various gases such as O_2 , H_2 , H_2O , $C_n H_m$, and CO come out from the large heating system and gives somewhat complicated effects on the interfacial chemistry at CeO/Ni which is important for the epitaxial growth of the film. The results of XRD measurements on the films fabricated in the controlled partial pressures of those gases will be presented.