

Deposition Condition of $\text{Sm}_{1-x}\text{Dy}_x\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$

S. M. Lim, K. J. Jang, D. Youm

Department of Physics, KAIST, Daejeon, Korea

We deposited $\text{Sm}_{1-x}\text{Dy}_x\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ ($0 < x < 1$) using thermal evaporation on STO, LAO single crystal, and buffered Ni. We vary substrate temperature, O_2 partial pressure, Sm and Dy atomic ratio. Having the Sm ionic valence +2 or +3, there are solid solution in Sm, Dy, and Ba. We measured T_c , I_c , EDS and XRD θ - 2θ scan.

keywords : Samarium, Dysprosium , Solid solution

Acknowledgement

This research was supported by a grant from Center for Applied Superconductivity Technology of the 21st Century Frontier R&D Program funded by the Ministry of Science and Technology.