Abstract

High Temperature Superconducting Material and a Method for Production

The present invention provides a process for producing a $LnM_2Cu_3O_x$ high-temperature superconductive powder, the process comprising:

i) providing an aqueous solution of Ln, M and Cu and at least one mineral acid;

ii) adding at least one sequestrating agent and, optionally, at least one dispersant to the solution to form a precipitate;

iii) recovering the precipitate from the solution; and

iv) heating the precipitate in a flow of oxygen to form the $LnM_2Cu_3O_x$ powder,

wherein Ln is a rare earth element, preferably Y, Ce, Dy, Er, Gd, La, Nd, Pr, Sm, Sc, Yb, or a mixture of two or more thereof, and

wherein M is selected from Ca, Sr, and Ba.

(Figs. 13A -13F)