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Resistivity, RRR and thermal conductivity of Ag and Ag alloy sheath are important parameters for designing Ag/Bi-2212 magnets but have not yet been determined. It is difficult to measure them in reacted Ag/Bi-2212 wires because the T_c of reacted commercial Ag/Bi-2212 strands is ~82 K and because it is unknown to what degree Cu that diffuses from Bi-2212 filaments into Ag would affect RRR of Ag and Ag alloys and how these relationships will change with heat treatment. We proposed a new method for determining RRR and its dependence on heat treatment. The new approach takes into consideration of Cu loss. We also measured magnetoresistivity and thermoconductivity of Ag and Ag-0.2wt%Mg used in commercial production of Ag/Bi-2212 from 4.2 to 300 K and in magnetic fields up to 14.8 T.

melt-processing optimized for Ag/Bi-2212 in pure O_2







Electrical and thermal conductivity of Ag and AgMg sheathes in Ag/Bi-2212 wires and their dependence on heat treatment <u>Pei Li¹, Liyang Ye^{1, 2}, Jianyi Jiang³, Tengming Shen¹</u>

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