SUPERCONDUCTING TUNNEL JUNCTIONS WITH HIGH-TRANSPARENT BARRIERS

V. E. Shaternik, E. M. Rudenko

G.V.Kurdyumov Institute for Metal Physics, Nat. Acad. Sci. of Ukraine (36, Academician Vernadsky Blod., Kyiv 03142, Ukraine; shat@d24.imp.kiev.ua)

Summary

Current-voltage characteristics (CVC) of NbN-isolator-Pb tunnel junctions with high-transparent tunnel barriers are studied experimentally. To calculate CVC of superconducting tunnel junctions with a high transparency of tunnel barriers, it's necessary to take into account the processes of Andreev reflection and transmission of quasiparticles in these junctions.