

Penetration depth of magnetic field into $\text{YBa}_2\text{Cu}_3\text{O}_x$ film on polycrystalline Ag substrate

R. Zalecki,¹ W.M. Woch,¹ M. Chrobak,¹ and A. Kołodziejczyk¹

¹*Solid State Physics Department,
Faculty of Physics and Applied Computer Science,
AGH University of Science and Technology, Cracow, Poland*

The magnetic field penetration depth into $\text{YBa}_2\text{Cu}_3\text{O}_x$ film with the critical temperature of 89 K were determined from the a.c. susceptibility measurements. The YBCO film was deposited directly on polycrystalline Ag substrate by the sedimentation process. When the sample is in the Meissner state, the dispersive component of the a.c. susceptibility as well as its temperature dependence reflects the changes of the penetration depth(s) with the temperature. In this film, the penetration depth are of the order of few micrometers.