

Heat transfer at a sapphire –indium interface in the 30 mK –300 mK temperature range

Heat transfer is an essential contribution to the overall performance of cryogenic systems. The influence of the interface thermal contact is rising with decreasing temperature. We are studying the thermal performance of copper –indium –sapphire sandwich setup to achieve maximum thermal contact at temperatures well below 300 mK. Steady-state measurements with indium in normal conducting and superconducting states, with and without compressing force have been performed, as well as a series of transient measurements investigating the thermal diffusivity of copper and sandwich setup. Obtained results along with a precise description of our setup will be presented.

Summary

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