Superconductivity and Electron Tunneling

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Abstract

Tunnel effect between metal layers is analyzed here. A potential difference imposed between two metal layers creates an electron tunneling current, and its relation with the potential depends on the state of the layers. Here is presented the case when one of the metals, Lead, is in the superconducting state and the other, Aluminum, in the normal state. By analysis of the data the gap of the Lead and other consequences can be inferred.

1 Introduction

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2 Theoretical Approach

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3 Experimental Method

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4 Experimental Results

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