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**Mobility and Density of Charged Carriers in Thin Films**

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The purpose of this experiment was to make Gold thin films using the vacuum evaporation

system and to find the temperature dependence of mobility and Hall coefficients and compare the

results to that of bulk materials. The Hall coefficient was found using an electromagnet setup.

The mobility was found by using the relationship between the density of the charge carriers and

resistivity. The four probe method was used to find the resistivity.