

Hall Effect Lab

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Nothing is here

INTRODUCTION

APPARATUS

The apparatus consisted of the following.

- Doped silicon wafer
- Pre-wired circuit board
- Carbide scribe
- 2 soldering iron
- Indium solde
- Lead-tin solde
- Rubber cemen
- Fine wire
- Electromagnet and power supply
- Current source (dc power supply)
- Two multimeters (for V and I)

MAKE HALL SAMPLE

Wire Pair	Resistance (Ω)
3-2	22760.0
3-6	24550.0
3-5	66430.0
3-4	26940.0
3-1	28570.0
2-6	11213.0
2-5	12445.0
2-4	12060.0
2-1	11665.0
6-5	51390.0
6-4	8893.6
6-1	9566.0
5-4	171760.0
5-1	176260.0
4-1	12296.0

Procedure

Results

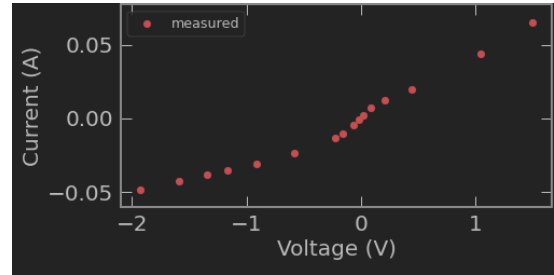


FIG. 1. $I(V)$

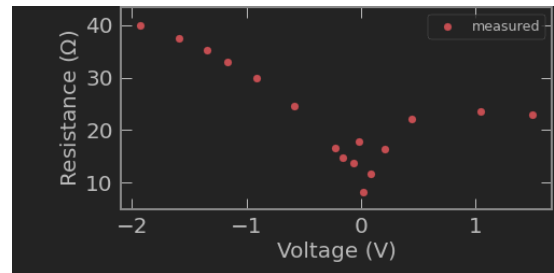


FIG. 2. $R(V)$

$$\eta_{PV} = P_E/P_L$$

(1)

Conclusions

SUMMARY

TABLE I. Measured and accepted values of the speed of light and refractive index of various materials.

Property	Measured Value	Accepted Value	Refs.	Deviation
ρ	$0.09 \pm 0.02 \text{ (} cm\Omega \text{)}$	$5.86 - 6.31 \text{ (} cm\Omega \text{)}$	[?]	2σ
μ	$320 \pm 60 \text{ (} \frac{cm}{Vs} \text{)}$	$455 \text{ (} \frac{cm}{Vs} \text{)}$	[?]	-3σ

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[1] Wikipedia, Heat of Combustion: <https://www.wikipedia.com>
[2] Energysage, Most Efficient Solar Panels

<https://www.energysage.com/>
[3] Carbon Commentary, Hydrogen made by Electolysis <https://www.carboncommentary.com>
[4] Energy.gov, Fuel Cell Fact Sheet <https://www.energy.gov>