Lab 1A: Conductivity

Bijan Varjavand

1/31/2017

1 Data, part 1

We measured 3 rods: Brass, Titanium, and Aluminum Their diameters were 3.02mm, 3.05, and 3.05mm respectively

For our first sample, brass, we kept length constant at 21 cm and changed the voltage:

	Voltage	Current
1	0.058	0.031
2	0.194	0.117
3	0.281	0.164
4	0.395	0.232
5	0.521	0.307
6	0.738	0.436
7	1.444	0.856
8	2.681	1.592
9	3.359	2.000

We then measured the voltage change due to varying length across 3 different materials, shown below (with constant current of 1 Amp:

	All	Brass		Titanium		Aluminum
	Length(cm)	Voltage(mV)		Voltage(mV)		Voltage(mV)
1	2	0.161		1.412		0.206
2	4	0.323		2.475		0.330
3	6	0.468		3.806		0.441
4	8	0.630		4.946		0.565
5	10	0.789		6.381		0.675
6	12	0.937		7.556		0.781
7	14	1.108		8.846		0.806
8	16	1.245		10.048		0.972
9	18	1.394		11.350		1.063