

A-1. p-Ge has Seebeck coefficient of $300\mu\text{V/K}$ and n-type Bi_2Te_3 $-230\mu\text{V/K}$. If one makes a thermocouple from these two materials, how high is the voltage caused by the temperature difference of 50K.

A-2. Obtain expressions for electron mobility and for diffusion constant in terms of the conductivity and the Hall coefficient.

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