

Primer on Semiconductors: Lecture 2.1 Short Problem

Mark Lundstrom
Purdue University, Fall 2018

Provide a numerical answer to the question below.

A metallic carbon nanotube is a 1D conductor with an $E(k)$ given by

$$\dots \tag{1}$$

What is the velocity in cm/s of an electron on the +k branch?

HINT: Use SI units, and compute the answer in m/s and then convert to cm/s.