

# Thermoelectricity: From Atoms to Systems

## L3.1 Quiz

### Answers

- 1) What is the physical law that governs heat conduction in a solid?
  - a. Ohmic law
  - b. Seebeck effect
  - c. Fourier law
  - d. Newton's law
  - e. Boltzmann transport
  
- 2) To measure thermal conductivity of a single nanowire, it is desired to have it in contact between two suspended heater platforms in vacuum in order to ...
  - a. Minimize heat leakage through suspension beams
  - b. Minimize heat leakage through air convection
  - c. Minimize heat leakage through surface radiation
  - d. a and b
  - e. b and c
  
- 3) Which material typically has the lowest thermal conductivity among the following materials?
  - a. Aluminum
  - b. Diamond
  - c. Graphene
  - d. Single crystal Silicon
  - e. Amorphous Silicon
  
- 4) Which of the following temperature measurement techniques has the smallest spatial resolution?
  - a. IR thermography
  - b. Optical interferometry
  - c. Scanning thermal microscopy
  - d. Micro-thermocouple
  - e. Thermoreflectance with visible light