Thermodynamics and statistical mechanics

GRE Subject Test · GRE Physics · Vocabulary in context

Word	Example
entropy /ˈentrəpi/	Spontaneous heat flow from hot to cold increases total **entropy**.
reservoirs	A heat engine works between hot and cold **reservoirs**.
partition function /pɑːˈtɪʃn ˈfʌŋkʃn/	Divide each statistical weight by the **partition function**.
first law /fɜːst lɔː/	State the work sign convention before using the **first law**.
adiabatic /ˌædiəˈbætɪk/	In an **adiabatic** process, no heat enters or leaves the gas.
Boltzmann factor	The **Boltzmann factor** e^(−E/kT) makes high-energy states rare. e^(−E/kT)
fermions	Electrons are **fermions**: no two can share a state.
bosons	Photons are **bosons**: many can share one state.

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